HOW TO APPLY A FLAWLESS HIGH-GLOSS FINISH »

Giving a classic GT40 Mk.I a Gulf Oil makeover – p.20

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January 2014
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Chuck Sawyer's 1/32 scale Tamiya P-51D Mustang – p.22

PLUS

Update a vintage armor kit p.40

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OUR EXPERT MODELERS BUILD AND REVIEW 8 NEW KITS

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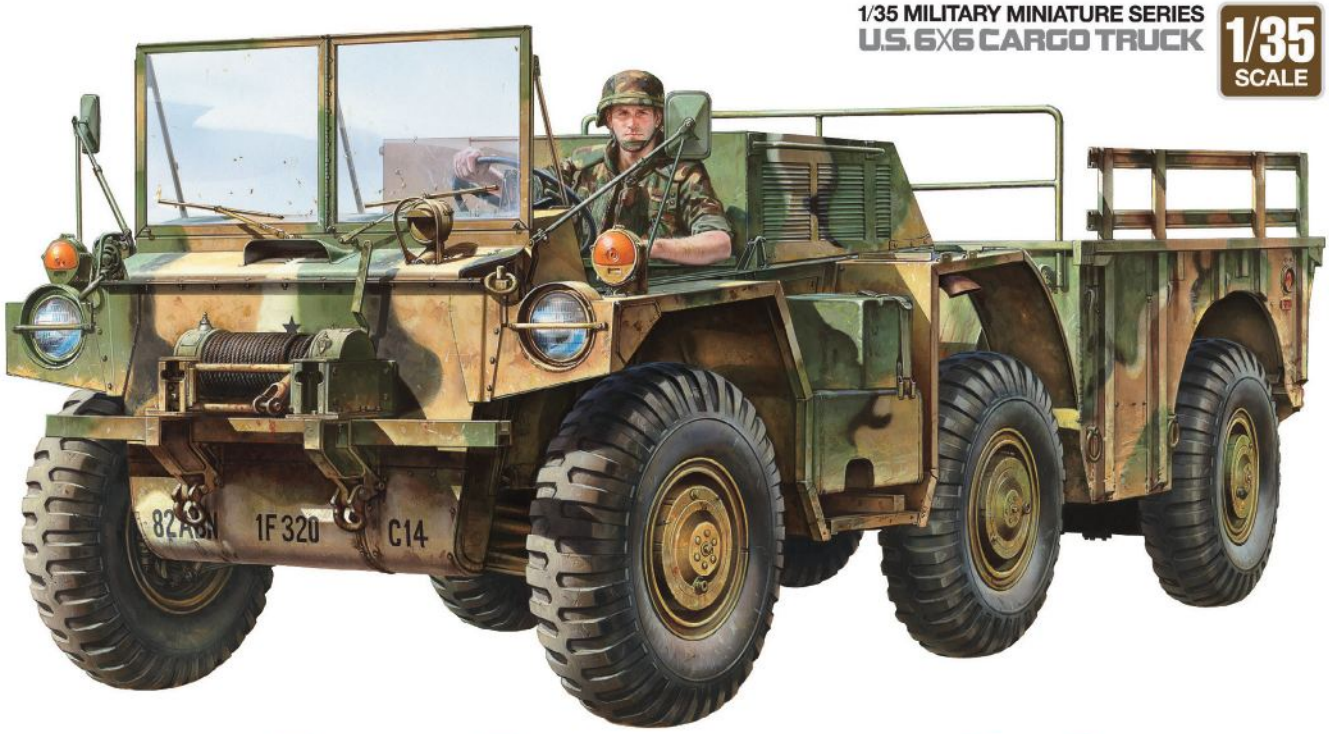
1/35 MILITARY MINIATURE SERIES
U.S. 6X6 CARGO TRUCK
1/35 SCALE



M561 GAMA GOAT

(Item 35330)

For the first time in 1/35 : The unique vehicle which could climb like a goat!

From its 1966 debut, the M561 Gama Goat showed incredible off-road ability, which was thanks to an articulation joint that connected the front tractor and rear trailer units, allowing 60° roll and 80° pitch ranges while also transferring power directly to the back wheels, making the Gama Goat a 6-wheel drive vehicle. This unique mechanism has long made the Gama Goat a hit among military collectors, and it now makes a long-awaited appearance in the 1/35 Military Miniatures series as a model which realistically reproduces the appearance and movement of the cargo truck. As fans have come to expect, this is achieved with a no-fuss assembly. This is an excellent chance for modelers to make a unique addition to their collection in the Gama Goat, which served U.S. forces from the 1960s through the 1980s and saw action in Grenada in 1983.

《About the M561 Gama Goat》 Designed to be amphibious and capable of operating in thick jungle, the Gama Goat needed serious mobility, which it achieved with 6-wheel drive enabled by an articulation joint sending power to the 4 tractor wheels and the 2 on the carrier. Just as impressively, the tractor and carrier could move independently, giving it superlative ability to traverse rough landscapes and leading to its "Goat" nickname. The "Gama" was borrowed from the inventor of the articulation joint, Roger Gamaunt. 14,000 Gama Goats were manufactured until production ended in 1973, and they were used by the U.S. Army and Marines as transport and towing vehicles through to the early 1990s.

Includes driver figure.

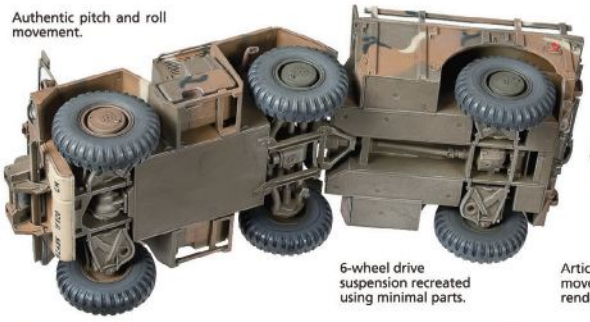
Optional windscreen and front winch parts.

Length: 170mm Width: 62mm

82nd Airborne Division, Grenada, 1983
2-unit form depicted with great realism.

3rd Marine Division, Camp Fuji
Comes with 3 different marking options.

Authentic pitch and roll movement.



6-wheel drive suspension recreated using minimal parts.

Articulation joint movement realistically rendered using poly cap.

★Images show assembled and painted model kit.
★Product may vary from images shown.

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With Tamiya's deluxe 1/32 scale P-51D Mustang established as a base camp, top-notch modeler Chuck Sawyer climbs to dizzying new heights of detail. Grab an O_2 bottle and follow along!

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Editor's Page

By Matthew Usher

You say you want a resolution?

WELCOME to the January issue of *FineScale Modeler*! Hopefully you've enjoyed the holiday season and are looking forward to the new year.

Speaking of new years, do you ever start things off with a resolution? As corny as it may be, I usually have a resolution or two in mind on New Year's Day, and it's not uncommon for at least one of them to be modeling-related. I take a look at things I'd like to do (or would like to do better) and make a conscious effort to set some goals.

TAKE A FEW MINUTES AND THINK ABOUT HOW YOU MIGHT LIKE TO IMPROVE AS A MODELER

One year, for example, I decided to learn how to apply a really smooth, high-gloss finish. I'd covered too many carefully prepared car bodies with embarrassing, orange-peel finishes. Lots of half-finished projects went back in the box while I switched to something that I knew I could handle.

To help get my gloss finishes dialed in, I read as much as a I could, I talked to other modelers whose work I admired, and most of all, I practiced. Slowly, I started getting the results I was looking for, and since then I've been happily working my way through my stockpile of car kits.

Speaking of stockpiles, one year I decided to back off on my kit buying and channel my modeling allowance toward tools and reference materials – things I could use to help finish all the kits I already had. (OK, I did cheat a little bit – there are always new kits you just can't say no to.)

The next time you head to your workbench, before you get started, take a few minutes and think about how you might like to improve as a modeler in the coming year. We'll be here with another year of great how-to modeling information to help you along. As always, if there are subjects you'd like to see us cover, don't hesitate to drop me a note.

Have a great new year, and enjoy the issue!

Matthew Usher

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GENERAL

Editorial: FineScale Modeler
21027 Crossroads Circle, P.O. Box 1612, Waukesha, WI 53187-1612
262-796-8776, weekdays 8:30 a.m. to 5 p.m. CT
Fax: 262-796-1383
editor@finescale.com
Website: www.FineScale.com

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Got a modeling problem? Our Questions & Answers column is here to help. Mail questions to "Q&A" (address at left), e-mail questions@finescale.com, or visit FineScale.com and click on "Contact Us." (For scale modeling basics, visit our website and look through our "How To" article archives.) We are not able to conduct lengthy research, such as answering questions on markings and unit histories. We publish letters of general interest in the magazine; however, mail volume and space limitations prevent us from printing every question. Please include your name, town, state, and a daytime phone number.

READER TIPS

Would you like to share an idea about a tool or technique — and make a few dollars too? Send a brief description along with a photograph or sketch to "Reader Tips" (mail address at left; please enclose a stamped, self-addressed envelope for the return of photos. E-mail tips@finescale.com or visit FineScale.com and click on "Contact Us." Tips are paid for upon publication; if you live in the U.S., we'll need your Social Security number to pay you. *FSM* obtains all publication rights (including electronic rights) to the text and images upon payment.

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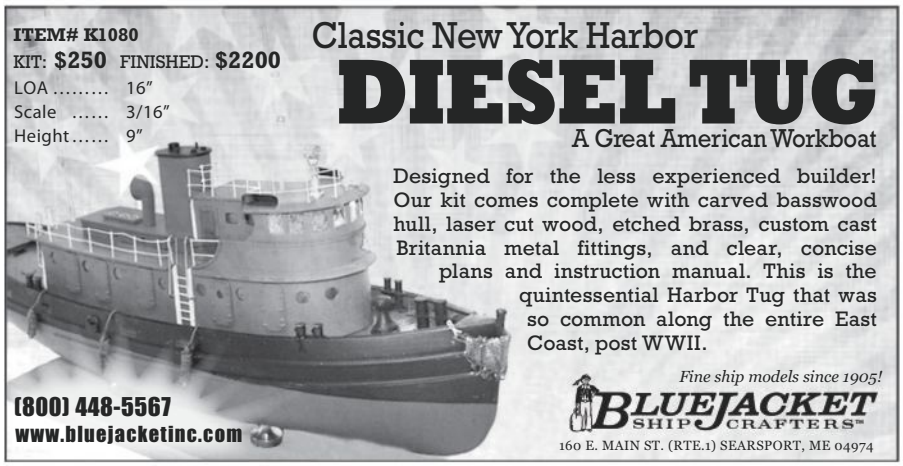
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Scale Talk

Your voice in *FSM*

Ages in Reader Gallery

I love *FineScale Modeler* and have been a loyal subscriber since the first issue. I enjoy the photos of what my peers are building, and I compare my work to what I see every month — I don't do as well, but I keep trying.

With each Reader Gallery submission, I wonder if I could do better or think the modeler should have changed this or that.

I'm often curious about the age of the modelers or their years of experience. How about adding that information to the photo caption? I think it might encourage younger hobbyists, and we critical guys would be more forgiving of "inconsistencies" we may notice.

Thanks again for a great publication!

- Jim Onorato
Brookfield, Conn.

Hi Jim! Thanks for the suggestion. It's one that we hear from time to time.

There are a couple of reasons that we don't include the ages of those who submit their models to Reader Gallery. The first is simply a privacy matter — some modelers might not want to include that information, so we don't ask.

Second, in our view, the finished model and what was used to get there is the primary concern.

We'll often note whether a modeler is exceptionally young or advanced in years, but that's because they're usually very proud to volunteer the information — and rightfully so!

– Tim Kidwell, associate editor

Job well done

Harvey Low's filters article in the November 2013 *FSM* (Page 20) was as clear an explanation of filters and their differences from washes as I've read. Of course, the rest of the issue was good, too — great reviews and kit builds (I particularly liked Alfonso Berlana's Italian navy dazzle camo).

- Bill Rutherford
Woodbridge, Va.

Let us know what you think!

E-mail your comments, suggestions, corrections, and additional views on *FSM* to editor@FineScale.com, or visit FineScale.com and click on "Contribute to *FSM*." You can also mail typed or hand-written letters to the address on Page 6.

Praise for "Willie & Joe" models

When I read Nate Jones' *FSM* Portfolio "Willie & Joe" (July 2013, Page 40), I had to admit to remembering the March 1994 Reader Gallery that included a "Willie & Joe" jeep diorama. That goes to show how old I am! (It would have been nice if you had reprinted the latter image for the purpose of comparison.)

I've always been a fan of Bill Mauldin's "Willie & Joe" cartoons because of the way he depicted soldiers: scruffy, tired, dirty, war-weary, and utterly laid-back.

I urge Capt. Jones to make two more dioramas based on two other "Willie & Joe" cartoons I recall: One has Willie confronting a German soldier at gunpoint and asking, "Didn't we meet at [Monte] Cassino?" The other has them running across a British soldier who says, "You blokes leave an awfully messy battlefield."

This Tamiya StuG III Ausf G was Nate's first-ever armor project. He modifies scale figures and builds scenes to match Bill Mauldin's World War II "Willie & Joe" cartoons.

I've seen the original cartoon that Capt. Jones' "Able Fox Five" diorama is based on, and I have to say it's spot on to Mauldin's rendering of the StuG, apart from the hull-mounted machine-gun barrel.

- Gary Watson
Cramlington, Northumberland, England

www.FineScale.com
To learn more about Bill Mauldin, Nate Jones, and how he built his "Willie & Joe" vignettes, visit www.FineScale.com/OnlineExtras.

Serenity at last

I was very pleased and not surprised that the spaceship *Serenity* from the "Firefly" TV show and subsequent "Serenity" film was the most requested science-fiction kit in your recent poll. I know a few people in the scale model industry and understand that the company that has the "Firefly" license has been sitting on it for some time. Even sadder is that this company doesn't even make model kits. Thank goodness for resin!

- Jim James
Orlando, Fla.

Jim, we can neither confirm nor deny your suspicions as to who owns the "Firefly" license. However, we are big fans of the TV show and movie and would also love to see a plastic model of this kit. No power in the 'verse can stop our dreaming, right? - T.K.

Thoughts about research

In response to Editor Matthew Usher's November 2013 page, I also enjoy researching model projects. As a model railroader and builder of model trucks, I consider myself a "prototype" modeler, meaning I build specific locomotives, rolling stock, structures, or vehicles.

For my 1/25 scale trucks, I get the best results by combining different types of research. Often a single photo will provide the inspiration for a project. Sometimes I can find a photo of the opposite side of a truck or similar vehicle from the same fleet. In some cases I've been able to measure and photograph the actual truck I intend to model. If I can, I'll talk to the truck's driver(s) to find out interior colors, personal touches they've added, and engine/transmission/suspension details. I've used my own recollections and snapshots for build-

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ing scale replicas of the trucks I drove long-haul years ago.

I view truck kits as sources of parts rather than complete models, kitbashing, sourcing aftermarket details, and scratch-building when necessary to come up with an accurate replica. Being Canadian also keeps it interesting, because there are often subtle differences between trucks in Canada and their U.S. counterparts, which I find most kits are patterned after. A good example of this is the slightly larger spacing between tandem drive and trailer axles: 60" and 72" being quite common in Canada, as opposed to 54" on many U.S. trucks. A small difference, but one that helps make models of Canadian rigs look right.

- Robert Nagle
Coldwater, Ontario, Canada

Decals for figure faces

Although I have seen some beautiful examples, faces on scale figures are probably the most difficult to get to look right. A lovely airplane can be ruined by seeing its pilot sitting there with a blank, monochromatic, flesh-colored face. I suggest some of the fine decal makers offer a variety of faces in 1/72-1/24 scale that respond well to setting solution. I think there would be a huge market for such decals.

- Lonnie Whittington
Phoenix, Ariz.

Lonnie, manufacturers have released decals for eyes and tattoos and scars — those details many modelers find laborious or even impossible to paint to their personal standards. Archer Fine Transfers (www.archertransfers.com) and Zotz (www.zotz-decals.com) offer a wide range of eye colors, styles, and scales. I have yet to see a full face decal, though. - T.K.

More kits with research materials

First, let me say that the arrival of each *FineScale Modeler* in the mailbox immediately puts me in a good mood. Second, I'd like to suggest an addition to the New Products section: upcoming or soon-to-be-released kits.

Lastly, regarding the kit research question: I do research for every kit I build to make sure it's as authentic as I can make it. However, I don't go overboard. The amount of extra research does depend on how much info comes with the kit.

I recently bought a Revell 1/48 scale F9F Panther that included a book on U.S. Navy aircraft of the Korean War. As soon as I opened it, I wished more kits contained something similar, maybe not to the extent of a softcover book, but at least a booklet with color photos of cockpits, weapons, and paint schemes.

I'd like to see more-detailed instructions where a part is referred to by its name, not just its part number. As a kid, I learned a lot about aircraft by building kits that provided that information.

Nowadays, I'd say 80 percent of my research involves investigating paint colors. The other 20 involves actual photos of whatever I'm building.

- Kevin Gallagher
Irvington, N.Y.

Correction

In "Big-scale P-47 Thunderbolt x 2" by Dave Gianakos (November 2013 *FineScale Modeler*, Page 47), we incorrectly listed the size of the aluminum tube he used to replace the Vintage Fighter Series kit's machine-gun barrels. The measurement should have read .09" outer diameter.

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FSM Editor Matthew Usher highlights what's inside the current and past issues.

New Product Rundown
Editorial Assistant Monica Freitag and Associate Editor Aaron Skinner pick the hottest releases and show you why they rock.

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ComposiMold presents alternative to RTV molds for casting

This one-part system is easy to use and reusable

Modelers cast resin when they need multiple copies of a converted or scratchbuilt part. That way, they can concentrate on getting one master right rather than having to make several identical parts by hand.

Two-part room-temperature-vulcanizing rubber has been the go-to product for making molds for this process, but it can be time-consuming, a bit messy, and, if you don't get the mixture quite right, frustrating. Plus, it can be expensive to make a mold you use only a few times.

ComposiMold aims to change that. It is a one-part, easy-to-use molding compound that can be reused.

FSM received a couple of 20-fluid-ounce containers, so I thought I'd give it a whirl.

I needed to modify the engines on a Hawk 1/96 scale Vickers Viscount to represent the Dart Mk.510 engines carried on the later V.700Ds. I made a master by building up the diameter of an assembled kit engine with strip styrene. Putty and super glue blended the profile.

After checking the engine for problems and brushing on mold release to keep the master from sticking, I secured it inside a paper cup with modeling clay.

Heating the ComposiMold proved easy enough. I removed the lid and popped the container straight into the microwave. With the unit on full power, I heated the amber-colored solid for 3½ minutes, stirring every minute. The time will vary depending on the microwave and the size of the container, so check it often. The instructions mention that the container can melt if the stuff gets too hot, and that you shouldn't get it hotter than 200 degrees Fahrenheit.

Wearing gloves, I slowly stirred the thick liquid a final time. Then, I carefully poured the ComposiMold into the cup around the master. I noticed a few bubbles in the mix as it was pouring, but they all but disappeared as it set. The one issue I encountered was that the modeling clay got too soft and the master threatened to fall over. I was able to prevent that and leave the material to harden overnight.

You can speed the process by placing the material in the refrigerator or freezer, or by surrounding it with ice packs. The website warns against placing it in cool water.

The next day, I popped the master out of the mold cleanly and set about casting a copy using Alumilite two-part resin.

A few minutes later, I was rewarded with a copy of my master that, aside from a couple of bubbles in the resin, resembles my hurriedly-built master. The mold reproduced even faint panel lines. The surface seems a little rough, but it's nothing light sanding can't fix.

I plan to refine the master and redo the mold, so it's nice to know I haven't wasted the ComposiMold. I can melt it in the microwave and return it to the container.

For more information, including tutorials, hints, and tips, and to order the compound, visit www.composimold.com. It is available in several sizes: A 10-fluid-ounce container costs $20; a 20-fluid-ounce, $29.95.

Tamiya backdates its M151 for Vietnam

Tamiya continues its recent trend of modifying existing kits to create new models with the M151 Military Utility Tactical Truck, or MUTT. Designed to replace the MB and M38 jeeps of World War II and Korean War fame, the M151 entered production in 1959 and served in Vietnam and into the 1990s with the U.S. Army and the Marine Corps.

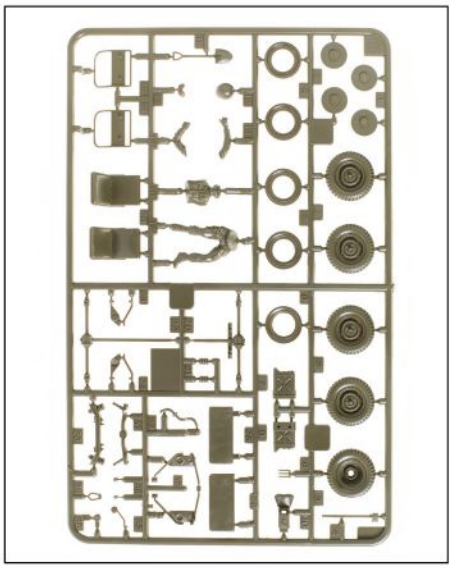
Tamiya's first kit, an M151A2, hit the market in 1982. Now come two new kits: One, an M151A2 in Grenada, 1983 (No. 35332), is essentially a repop of the existing tool with new figures, stowage, and decals. The other is an M151A1 in Vietnam service (No. 35334); Tamiya has altered some of the parts and included new ones to backdate the vehicle. A new body has the early, straight front fenders, and new sides are designed to take optional rear quarters with and without tow shackles. Optional front bumpers allow two styles of tow shackles.

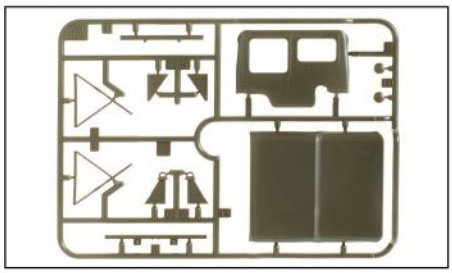
The rear suspension represents the early vehicle, which was notorious for rollovers.

Also new: a canvas cover and supports. The headlights are molded separately, but in green rather than clear plastic. The windshield is clear styrene sheet.

A small decal sheet provides markings for two Mutts: One from the 3rd Marine Division, the other with the Army's 18th Military Police Brigade.

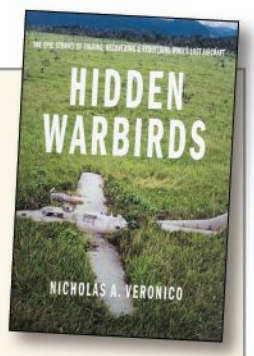
Distributed in the U.S. by Tamiya America, 800-826-4922, www.tamiyausa.com, each MUTT costs $34.





BOOKSHELF

Recovering warplanes revealed



Every summer, I get a chance to attend one of the greatest gatherings of warbirds in the world at the Experimental Aircraft Association's annual AirVenture in Oshkosh, Wis. The planes that battled for superiority in the skies during World War II are a special breed, and seeing them fly is awe-inspiring. So is reading about the recovery of these aircraft, often from remote and treacherous crash sites.

Those recoveries are the subject of Nicholas A. Veronico's *Hidden Warbirds* (Zenith, ISBN 978-0-7603-4409-5).

Veronico divides the book into sections by the kinds of locales the aircraft were recovered from: underwater, jungle, frozen north, as well as unusual places and returns from fleet purchases. Some of these aircraft, like *Glacier Girl* and *Fifi*, are well known; others are not as famous.

I really enjoyed the interweaving of each aircraft's background up to its crash and subsequent discovery with the story of the often-perilous recoveries overcoming natural and bureaucratic obstacles. The lively text is easy to read, and the information and photos compelling enough to keep your interest.

For more information, and to purchase the book for $30, call 800-458-0454 or visit www.zenithpress.com.

Glue Looper a good all-round applicator

Getting just the right amount of liquid cement or super glue into a seam can be tough. Pointed objects like toothpicks are accurate, but it is difficult to control the amount of adhesive you transfer: not enough and the part won't stick; too much will damage the model.

The Glue Looper, from Creative Dynamic, offers an elegant, easy-to-use solution — thin photoetched-brass loops. They are conveniently designed to fit into almost any hobby knife handle.

Each set contains four loops in three sizes. They are designed to pick up just the right amount of super glue, then transfer it to the join. Simply hold the loop to the seam, and capillary action will draw the glue into the gap.

To fine-tune the amount of glue in the loop, the instructions recommend brushing the side of the loop against a scrap of plastic.

It should only be used with thin cement or super glue. And if the loop becomes clogged with glue, the instructions say to hold the tip over a flame briefly to remove the excess.

For more information and to buy, visit www.creativedynamicllc.com. Each set of The Glue Looper costs $12.99 plus $3 shipping.

New Products

Compiled by Monica Freitag

AIRCRAFT

1/32 SCALE KITS

Hawker Tempest series II. Mk.Vc, No. 32016, $74.95. Deluxe kit. Look for a detailed review in an upcoming issue of *FSM*. From Pacific Coast Models, Inc.

1/32 DETAIL SETS

B-17 Flying Fortress landing gear (for HK Models), No. 32076, $18.95. From Scale Aircraft Conversions.

1/48 SCALE KITS

Dornier Alpha Jet A/E advanced trainer/ light attack aircraft, No. 48043, $64.95. New tool, Cartograf decals. Look for a detailed review in an upcoming issue of *FSM*. From Kinetic, available from Stevens International Inc.

Focke-Wulf Fw190D-10, No. 81717, $28.99. From HobbyBoss, available from Squadron Products.

JAS 39A/C Gripen, No. KH80117, $48.95. Look for a detailed review in an upcoming issue of *FSM*. From Pacific Coast Models, Inc.

MiG-21PFM, No. 8237, $59.95. ProfiPack Edition. From Eduard and Associates.

F-105D T-Stick II, No. 85-5866, $22.95. From Revell.

Douglas TBD-1A Devastator floatplane, No. L4812,$69.95. From Great Wall Hobby, available from Dragon Models USA Inc.

1/48 DETAIL SETS

Nesher/Mirage V landing gear (for Italeri), No. 48238, $17.95. From Scale Aircraft Conversions.

P-47 Thunderbolt landing gear (for Academy and Eduard), No. 48239, $12.95. From Scale Aircraft Conversions.

F-80 Shooting Star landing gear (for HobbyBoss), No. 48240, $13.95. From Scale Aircraft Conversions.

1/72 SCALE KITS

Soviet Pe-2 bomber, No. 80296, $17.99. From HobbyBoss, available from Squadron Products.

Sea Vampire F.20, No. 7488, $22.95. From Cyber-hobby.com, available from Dragon Models USA Inc.

1/144 DETAIL SETS

WWII Allied heavy bomber dispersal print. Available in 1/144 MIA-14415 $4.95 (shown)and 1/72 MIA-7215 $21.70. From Noys Miniatures, available from Stevens International.

OTHER SCALE KITS

AH-64D Apache Quick Build, $19.99. Look for a detailed review in an upcoming issue of *FSM*. From Airfix.

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F-22 Raptor Quick Build, $19.99. From Airfix.

T-34/85 1944 Factory 174 (full interior kit), No. AF35145, $63. From AFV Club, available from Merit International.

M151A2 US utility truck "Grenada 1983," No. 35332, $34. From Tamiya America Inc.

ARMOR

1/35 SCALE KITS

Churchill Mk.III Dieppe Raid British infantry tank, No. AF35176, $70. From AFV Club, available from Merit International.

Royal Norwegian Army NM-116, No. AF35S82, $70. From AFV Club, available from Merit International.

Flugzeugabwehrkanone 28 (German Flak 28 4cm anti aircraft gun), No. AF35186, $46. From AFV Club, available from Merit International.

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New Products

M151A1 US utility truck "Vietnam War," No. 35334, $34. From Tamiya America Inc.

British LRDG command car - North Africa with 7 figures, No. 32407, $46. From Tamiya America Inc.

T-34/85 Mod.1944, No. 9146, $29.95. Super Value Pack, contains Soviet Infantry Tank Riders. From Cyber-hobby.com, available from Dragon Models USA Inc.

PzKpfw III (5cm) Ausf H SdKfz 141 early production, No. 6641, $54.95. Smart Kit. 1939-1945 series. From Dragon, available from Dragon Models USA Inc.

IJA Type 95 light tank "Ha-Go" Hokuman version, No. 6777, $49.95. Smart Kit. 1939-1945 series. From Dragon, available from Dragon Models USA Inc.

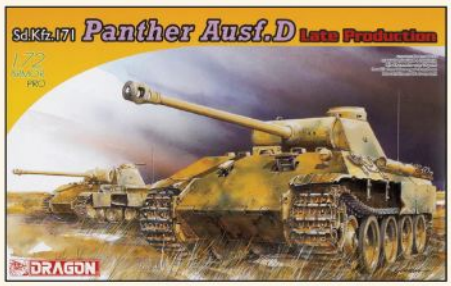
StuG III F/8 early production Italy 1943, No. 6620, $56.95. Smart Kit. 1939-1945 series. From Dragon, available from Dragon Models USA Inc.

Object 279 Soviet heavy tank, No. 35A001, $52.50. Look for a detailed review in an upcoming issue of *FSM*. From Amusing Hobby, available from Pacific Coast Models, Inc.

AFT-9 anti-tank missile launcher, No. 82488, $59.99. From HobbyBoss, available from Squadron Products.

1/72 SCALE KITS

PzKpfw III Ausf J, No. 7372, $19.95. Armor Pro. From Dragon, available from Dragon Models USA Inc.



SdKfz 171 Panther Ausf D late production, No. 7506, $22.95. Armor Pro. From Dragon, available from Dragon Models USA Inc.

5.5cm Zwilling Flakpanzer, No. 7488, $22.95. Armor Pro. From Dragon, available from Dragon Models USA Inc.

1/35 SCALE DETAIL SETS

Extra thin camouflage net. Available in Desert Tan AC35019; Jungle Green AC35020; and Snow Gray AC3502, $12.99 each. From AFV Club, available from Merit International.

Ostketten Workable track links, No. RE30008, $24.95. From Riich Models, available from Dragon Models USA Inc.

SHIPS

1/700 SCALE KITS

Soviet aircraft carrier *Baku,* No. 83416, $69.99. From HobbyBoss, available from Squadron Products.

MILITARY FIGURES

1/35 SCALE KITS

Hunting German tank crew, No. AF35092, $28. From AFV Club, available from Merit International.

British Commonwealth Universal Carrier crew in winter uniform 1943-45, No. RE35028, $13.99. From Riich Models, available from Dragon Models USA Inc.

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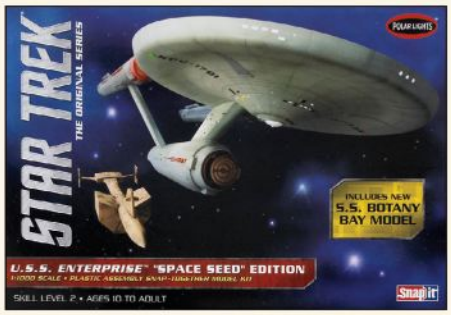
SCIENCE FICTION

1/1000 SCALE KITS

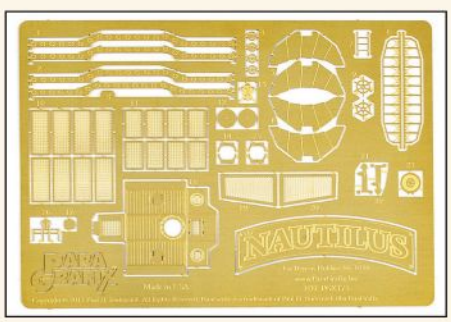


USS Enterprise "Space Seed" Edition, No. POL908, $29.99. Includes new S.S. Botany Bay Model. From Polar Lights, available from Round 2.

1/32 DETAIL SETS

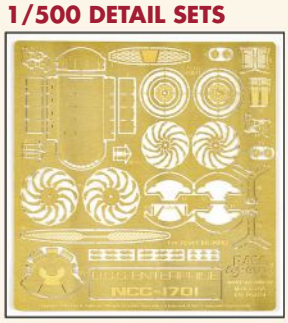
Original series "Battlestar Galactica" Viper photoetch set, No. PGX175, $24.95. Includes translucent printed films for lighting. From ParaGrafix.

1/144 DETAIL SETS



Nautilus, No. PGX173, $23.95. Photoetch includes full wheelhouse, plus etched hatch handles for the exterior. From ParaGrafix.

1/500 DETAIL SETS



USS *Enterprise* "Star Trek 2009"/"Star Trek Into Darkness", No. PGX174, $31.95. Photoetch includes intricate warp engine turbine blades for Revell Germany. From ParaGrafix.

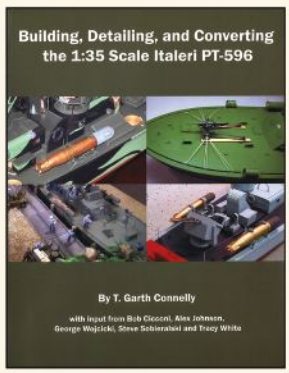
FANTASY FIGURES

OTHER SCALE KITS

Wolverine, No. POL892, $36.95. From Polar Lights, available from Round 2.

"Forbidden Planet" Robby the Robot — Movie Poster Edition, No. POL893, $42.95. From Polar Lights, available from Round 2.

BOOKSHELF



Building, Detailing and Converting the 1/35 Scale Italeri PT-596, $32.95, by T. Garth Connelly ISBN: 978-0-9841267-5-0, soft cover, 77 pages, mostly color photos, some black-and-white photos.

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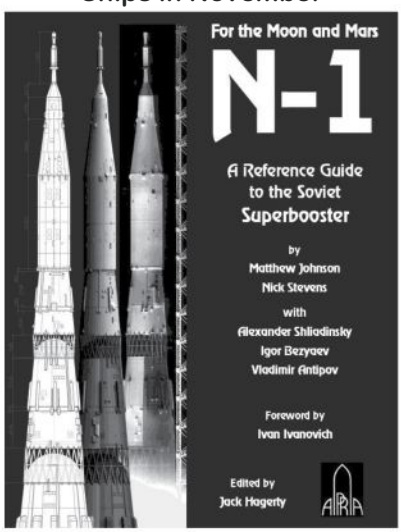

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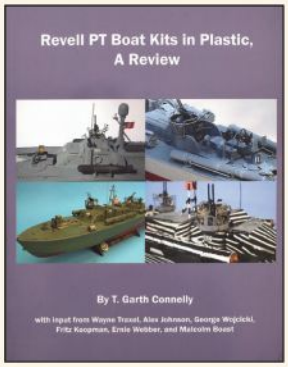
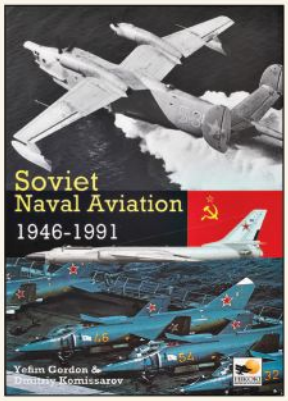
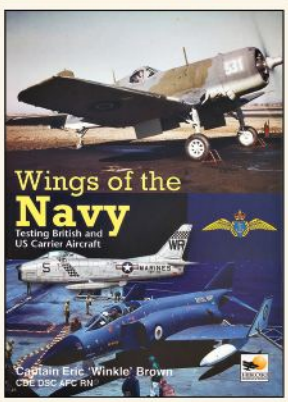


Revell PT Boat Kits in Plastic - A Review, $19.95, by T. Garth Connelly, ISBN: 978-1-62165-005-8, soft cover, 136 pages, mostly color photos, some black-and-white photos. From Chris Daley Publishing.



Soviet Naval Aviation 1946-1991, $56.95, by Yefim Gordon and Dmitriy Komissarov, ISBN: 978-1-902109-31-2, hard cover, 368 pages, over 600 color photos. From Hikoki Publications, available from Specialty Press.



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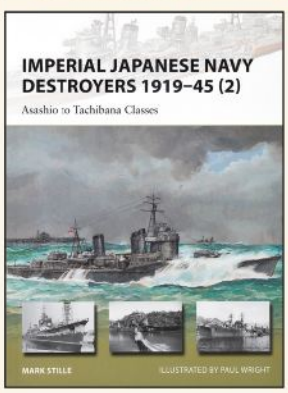
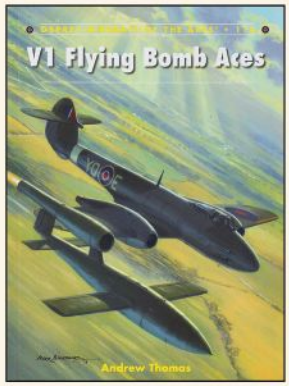


Imperial Japanese Navy Destroyers 1919-1945, $17.95, by Mark Stille, ISBN: 978-1-8490898-7-6, soft cover, 48 pages, color renderings, few black-and-white photos. From Osprey Publishing.



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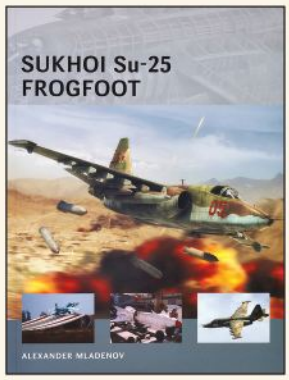
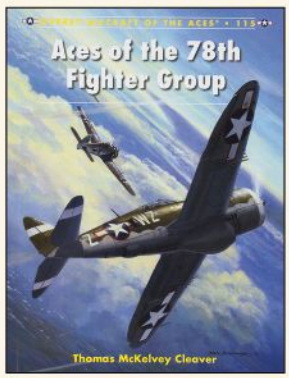
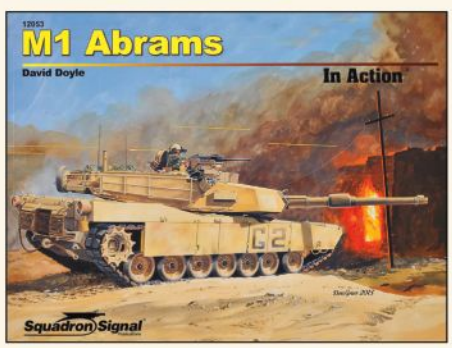


Sukhoi Su-25 Frogfoot, $18.95, by Alexander Mladenov, ISBN: 978-1-7820035-9-5, soft cover, 64 pages, all color photos. From Osprey Publishing.



Aces of the 78th Fighter Group, $22.95, by Thomas McKelvey Cleaver, ISBN: 978-1-7809671-5-8, soft cover, 96 pages, all black-and-white photos. From Osprey Publishing.



M1 Abrams In Action, $18.95, by David Doyle, ISBN: 978-0-89747-734-5, soft cover, 80 pages, all color photos. From Squadron/Signal Publications.

Spitfire, Merlin Variant Walk Around, $18.95, by Ron Mackay, ISBN: 978-0-89747-732-1, soft cover, 80 pages, all color photos. From Squadron/Signal Publications.

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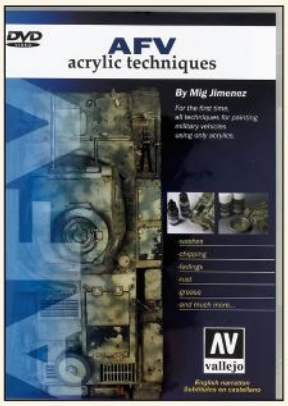
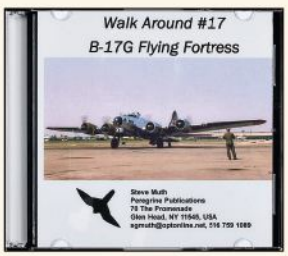


AFV acrylic techniques, No. 75000, $29.95, by Mig Jimenez. From Merit International.

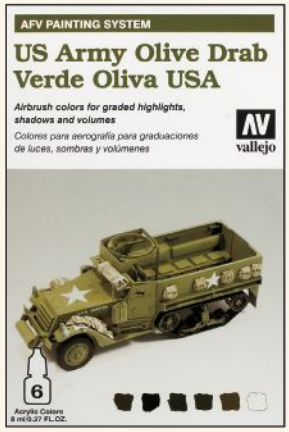
USN-USMC Collection No. 6, $12.95. From Aero Research Co.



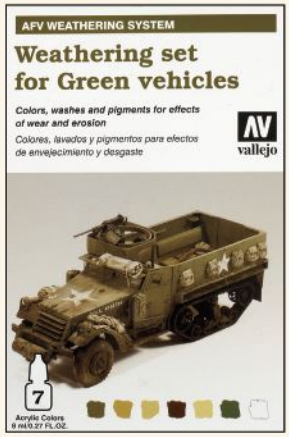
Walk Around #17 B-17G Flying Fortress, $10. From Aero Research Co.

PAINTS

Vallejo Umtarnfarben German ISAF color set, No. 71.159, $25.95. From Merit International.



US Army olive drab, No. VJ78402, $14.95. Airbrush colors for graded highlights shadows and volumes. From Merit International.



Weathering set for green vehicles, $14.95. Colors, washes and pigments for effects of wear and erosion. From Merit International.

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Painting a winning

Giving a GT40 Mk.I a Gulf Oil makeover • BY AARON SKINNER

In 1966, Dany Galgani attended the 24 Hours of Le Mans race and saw the GT40 Mk.II win. He's had a soft spot for Ford's fast endurance cars ever since, so he went all out on Fujimi's 1/24 scale kit of the 1968 winner.

To give the curbside model heart, Dany implanted a resin engine from Historic Racing Miniatures that included a fuel pump, oil coolers, oil tank, and engine frame. The set also supplied a lot of elements to enhance the kit's rather spartan suspension. "I scratchbuilt all the wiring and plumbing, the fuel filter, oil filter, starter motor, oil dipstick, battery cover, emergency shut-off switch, and the exhaust tie-down," Dany says.

Photoetched metal from Studio 27 provided details inside and out: front-wheel-opening deflectors; dashboard gauge bezels; gearshift gate; gas-tank covers; windshield wiper; race-number light frames; the nine-hole exhaust ventilation panel; and various hinges and latches. Precision Detail produced the seat-belt buckles, and the tire markings are from Speedline. Dany scratchbuilt the roll bar and red identification lights for the front and back. Cutting open the kit's doors and engine cover showed off all of his extra work.

He primed the body with Mr. Surfacer 1000 from a spray can. Dany says it's a great primer because it fills microscopic scratches and holes and produces a surface that paint adheres to well.

Dany uses a Grex Genesis XT airbrush powered by a Grex compressor, and does most painting at 15-20 psi.

He used Model Car World lacquer for the light blue (No. 2064), then mixed 9 parts Testors enamel orange (No. 1147) with 1 part gloss yellow (No. 1114) for the orange stripes. "Testors orange is a bit too red by itself," he explains.

He masked the complex curves with Frogtape Delicate Surface. "I do not like to apply masking tape to the whole surface of a model," Dany says. "I cut thin strips of masking tape — about ⅛" to 3⁄16" wide. At that width, the tape is easy to curve along the edge of the areas to be masked.

"Then I use tracing paper to create masks, using the previously laid thin stripes as guides. I tape the tracing paper with slightly wider stripes to the thin stripes. This way, only the thin stripes make contact with the surface of the model."

For the final sheen, Dany finds hand-brushed Pledge Future floor polish to be a great clear coat. If it ever yellows, it can be removed with ammonia-based window cleaner and reapplied, he says.

"I apply it rather generously, sponging up runs with the corner of a paper towel," he says. "It is important to use slow brush strokes; brushing too fast will create air bubbles that might stay trapped in it (as it sets). It dries to a very thin layer and, because it is self-leveling, any brush marks will disappear."

He lets the Future dry for several hours between coats. To check whether the finish is dry, Dany presses a fingernail into the Future in an inconspicuous area on the model. "If the nail leaves the slightest indentation, the Future is not dry enough for recoating yet," he says.

If he gets the Future on just right, Dany eschews the rubbing and polishing that typify car modeling. "But if it does (need buffing), toothpaste is the ideal polishing compound for it. All commercial polishing compounds, even those made specifically for plastic, contain ammonia and will remove Future instead of polishing it," he says of his choice.

Dany's advice for modelers looking to create accurate models: Do intensive research. "Lots of replicas have been made of this historic vehicle, all with various levels of authenticity," he says. "Finding photos of the real McCoy was as much work as building the actual model." **FSM**

A fan of the GT40, Dany felt compelled to build a model of the Ford race car that won the 1968 24 Hours of Le Mans. He superdetailed Fujimi's 1/24 scale Mk.I, then dressed it in a beautiful Gulf Oil livery.

finish

Metalizers: Following the instructions on the bottles, Dany airbrushed thin layers of Testors Model Master Metalizers on the engine, drivetrain, and suspension. He prefers the buffing versions because they offer more opportunities for creating varying degrees of polished metal.

After installing a Historic Racing Miniatures 289 cu. in. V-8, Dany plumbed and wired it. The paint is mostly Testors Model Master Metalizers.

Decals: Dany used the kit markings but backed the race numbers with discs of white decal film because the kit's roundels were too translucent.

Gulf Oil livery: To give the car its iconic pale blue and orange, Dany applied Model Car World blue and a mix of Testors orange and yellow. He airbrushes paint at 15-20 psi using a Grex brush.

Gloss coat: Believe it or not, Dany achieved the high-gloss sheen on the GT40 by hand-brushing Pledge Future floor polish. Applying it slowly and evenly results in a smooth, level finish that doesn't need polishing.

Masking: Even though he used Delicate Surface Frogtape, Dany wanted to minimize the amount of the adhesive in contact with the paint. He edged the areas to be masked with thin strips of tape that could be easily curved and burnished to the surface. He completed the masking with tracing paper taped to the edge strips.

Chuck was so crazy about Tamiya's 1/32 scale P-51D that he cleaned out the aftermarket and spent hundreds of hours detailing *Thunder Bird*, the Arizona-themed Mustang flown by World War II ace Capt. Ted E. Lines.

Model a magnificent Mustang

Pulling out all the stops to go deep with detail

BY CHUCK SAWYER

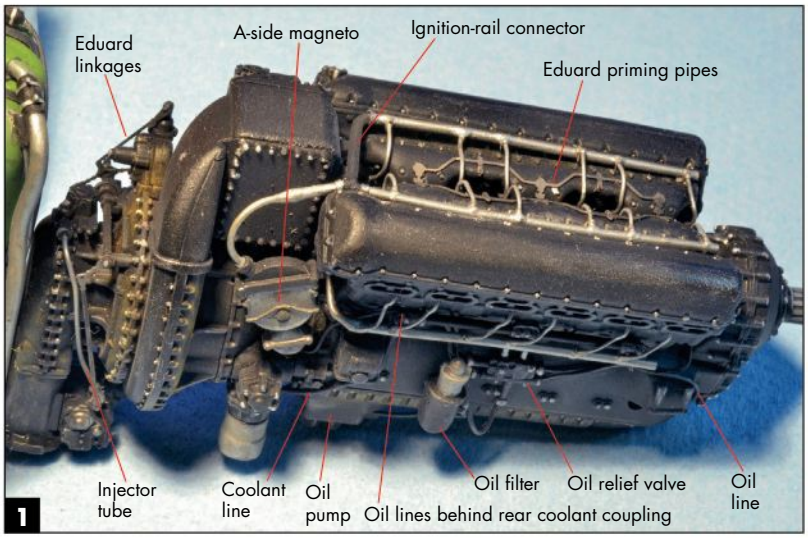
Tamiya's deluxe 1/32 scale P-51D Mustang is one of the most popular aircraft model kits out there — and I know it is one of my favorites.

To make mine stand out, I acquired just about every aftermarket part or accessory I could lay my hands on to kick it up a notch. Also, I superdetailed nearly every area of the aircraft I could.

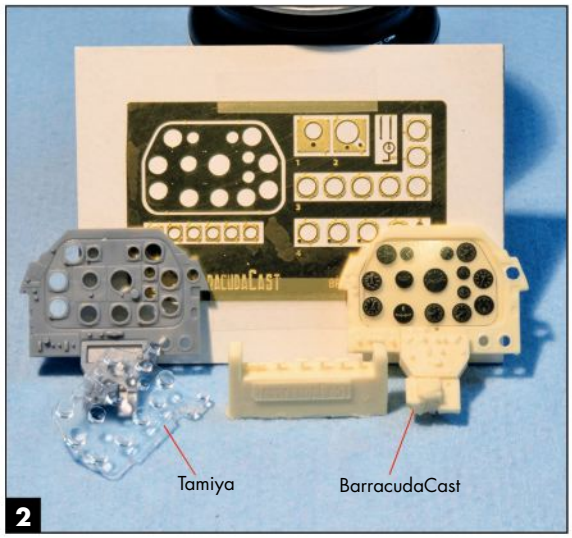
My subject is P-51D-10-NA No. 44-14570, flown by Capt. Ted E. Lines of the 335th Fighter Squadron, Fourth Fighter Group. Lines, from Mesa, Ariz., celebrated his state's rich Navajo heritage by naming his plane *Thunder Bird* and decorating it with that powerful Native American symbol. His 10 air victories were marked on the fuselage as arrowheads hanging from a shaft.

Like most fighter aircraft of World War II, this Mustang was fairly stained and worn, presenting opportunities to employ my favorite weathering techniques.

The Tamiya kit comes with options to model three different periods of P-51D production. This aircraft is mostly mid-production. But references show a few later parts; I also used those to make it as accurate as possible.

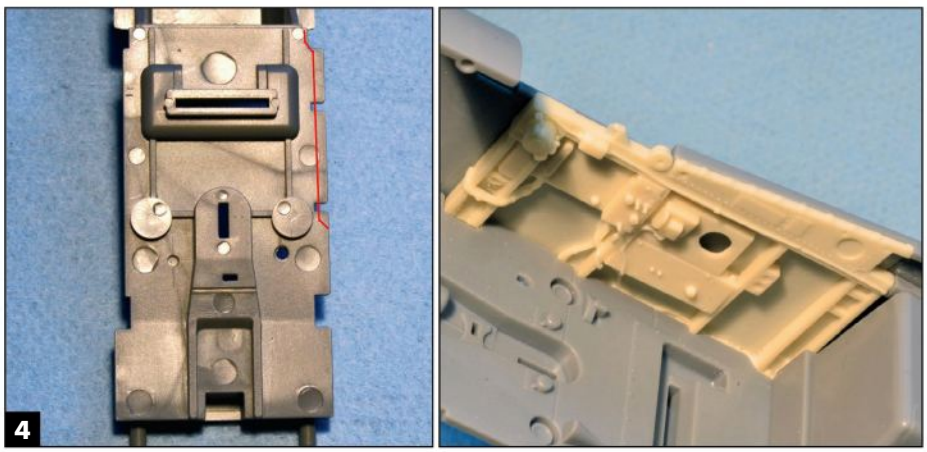


After painting the engine gloss black and picking out nuts and bolts with silver on a toothpick, Chuck added plumbing and ignition wiring according to an original Packard Merlin manual. Eduard photoetched metal and a scratchbuilt oil filter are among the adornments. Dry-brushed silver and Tamiya rust pastels provided weathering.

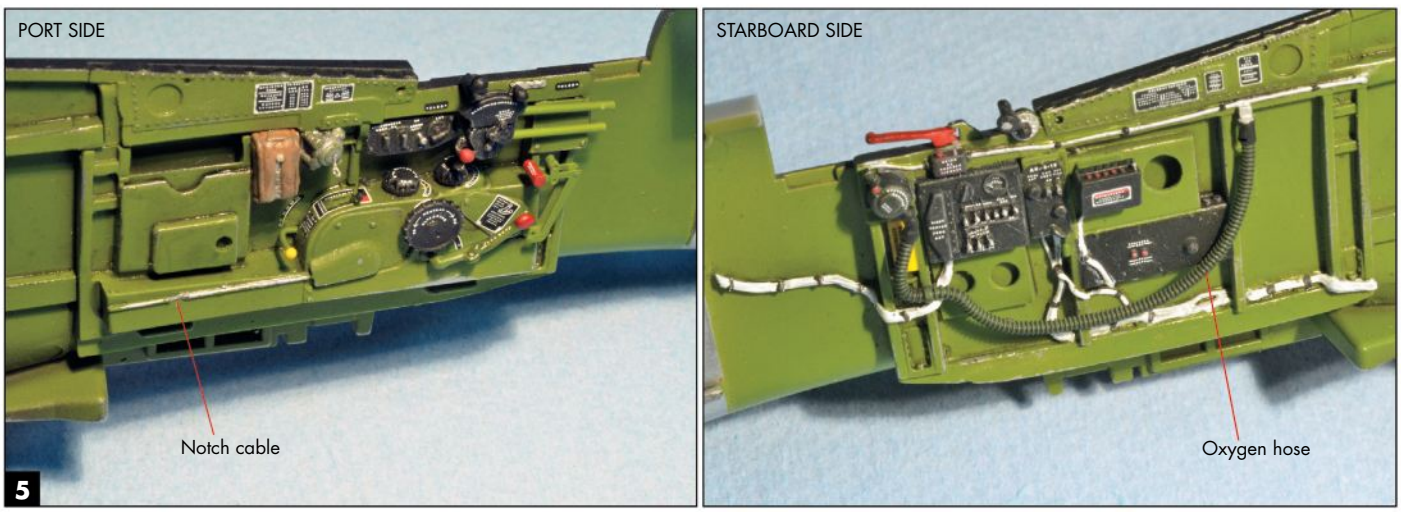


Passing up the kit parts (left), Chuck chose a BarracudaCast resin instrument panel with brass main panel and bezels plus superdetailed gauge faces in clear plastic. He attached the bezels with Pledge Future floor polish.

He painted the panel gloss black to receive BarracudaCal's tiny decals. After the decals, he applied a flat clear, then glued the clear plastic gauges to the back.

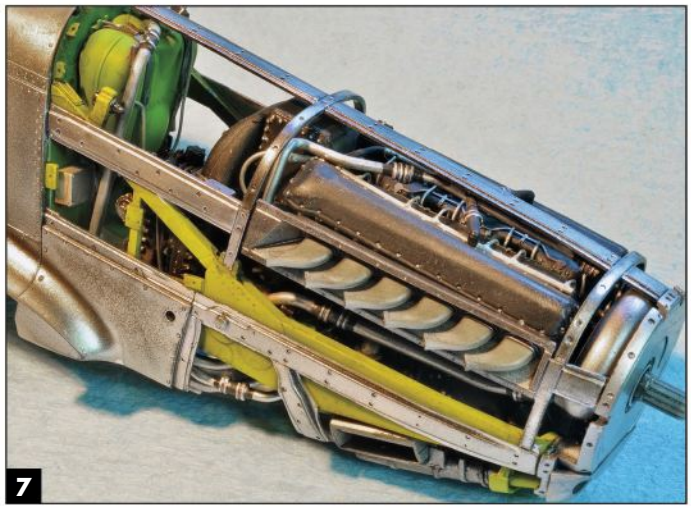


BarracudaCast side walls bring additional detail, but the floor needs trimming on the starboard side (along the red line) to fit the resin. Sanding and dry-fitting produced a flush fit. Then he primed the interior with Krylon black and base-coated with Alclad II aluminum.

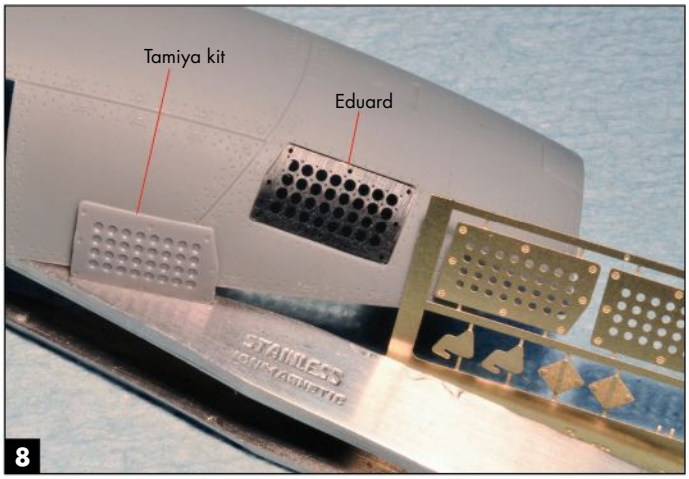


After adding more Eduard photoetched metal and BarracudaCast resin to the side walls, Chuck painted with enamels. Light sanding showed aluminum along sills and other worn areas. He also dry-brushed silver on black parts to highlight details. The Detailer black weathering wash added depth to the oxygen hose. A notch is needed in the cable at the bottom of the port wall to fit the seat.

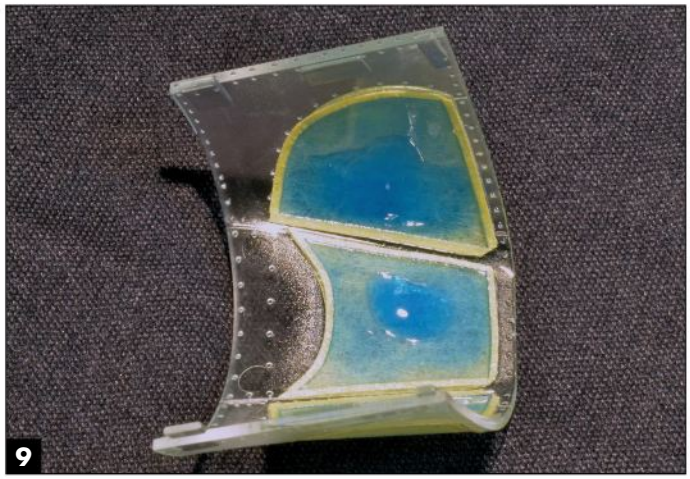
Chuck scratchbuilt hose clamps and plumbing lines behind the seat. He over-coated WebGarden's wood-floor decal with flat black to simulate the rubberized surface, then sanded lightly to reveal plywood underneath the pilot's feet.



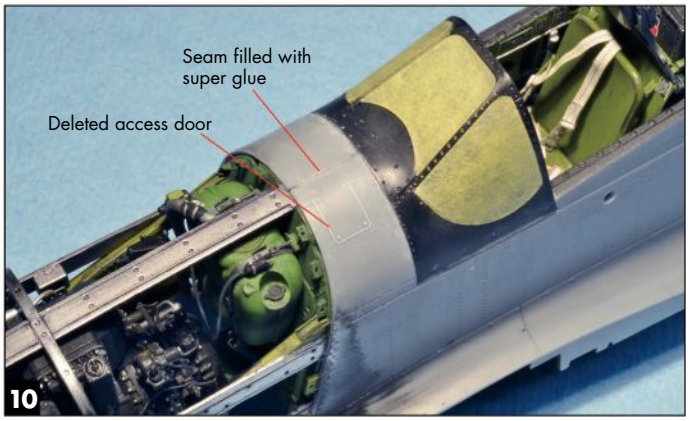
Checking references, Chuck painted interior parts and the engine cage in a complex pattern of aluminum and chromate green and yellow. Then he painted the exhaust stacks with Testors jet exhaust, misting light gray on the front of each to replicate exhaust staining from the one before it.



A remarkable part of Tamiya's kit is the set of removable engine cowlings made of superdetailed, very thin plastic held to the engine cage by tiny magnets. The bottom cowling received Eduard photoetched metal to replace the kit's molded carburetor vents.



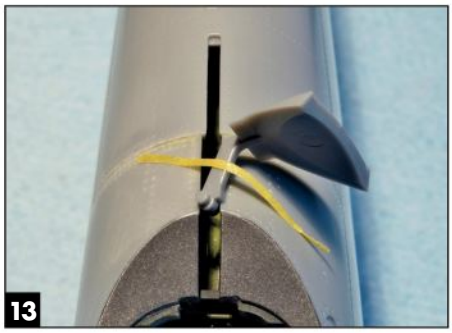
Eduard's precut masks made painting the canopy easy. To paint the interior flat black, Chuck first masked with thin Tamiya tape, then sealed it with liquid Micro Mask.



After painting the clear parts on the inside, Chuck installed them on the fuselage. "Glue the base of the inner glass so it's flush with the front of the windscreen," he advises. For this Mustang, he deleted the engraved hydraulic reservoir access, just forward of the windscreen, by filling the lines and sanding them smooth. Super glue filled the fuselage seam with no shrinkage. Chuck used a rivet tool to replace dzus fasteners lost to sanding.

Chuck cut 6" of pipe insulation and eased it onto the fuselage to protect the completed cockpit while he worked on the bottom. This protective shield also provides enough clearance to keep the engine off the work surface while the model is inverted.

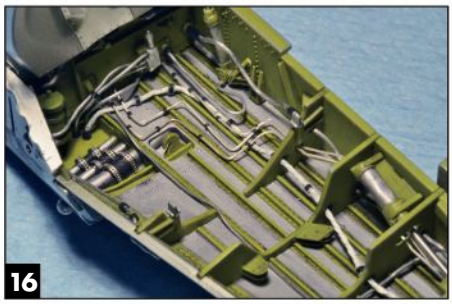
Eduard photoetched metal greatly improves the Mustang's distinctive air scoop. Although the kit calls for aluminum within this assembly, Chuck found chromate green was more accurate.



Chuck says, "A peculiarity of the Tamiya instructions is that a large panel behind the cockpit is not installed until late in the build, long after full assembly. However, with a little trimming the canopy actuator can be installed anytime; rotate the T-shaped part 90 degrees, slip it into the groove, then put it in position."

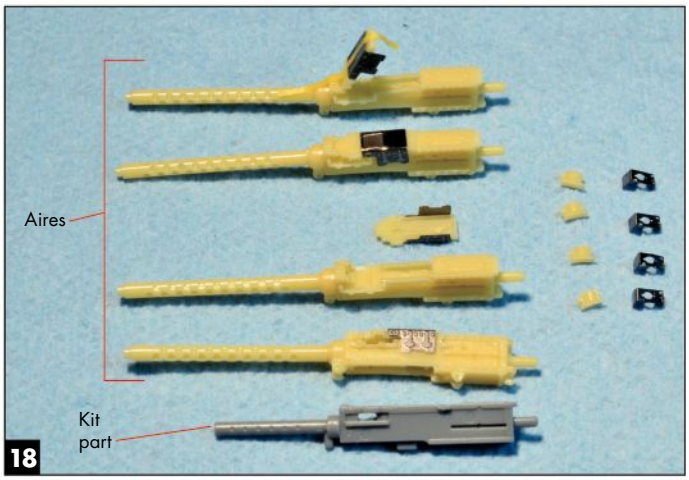
"You should install this panel earlier because there is a fairly large step and gap between it and the fuselage," Chuck says. "So you're either stuck with this flaw at the end or you'll make a mess of your paint trying to fix it." He sanded it flush, then restored the rivet detail with a needle in a pin vise.

The rear-wheel assembly slides in and out of the fuselage to allow for a wheels-up pose, but it leaves a big gap. Chuck flowed Tamiya extra thin cement into the gap and let capillary action carry it along the seam. The melted plastic closed the gap with no need for sanding or rescribing.



In the main gear bay, Chuck drilled holes in all the cross members to accommodate added plumbing and wiring. He painted the bay parts separately before installation, using two tones of aluminum and chromate green. Tapping Model Car Garage for supplies, he used 1/24 scale black spark-plug wire and vintage hose straps as well as The Detailer black wash. Larger lines are lead wire with black connectors that are bits of the wire insulation rethreaded onto the wire. He cut sewing pins for actuators; you don't have to paint those, either.

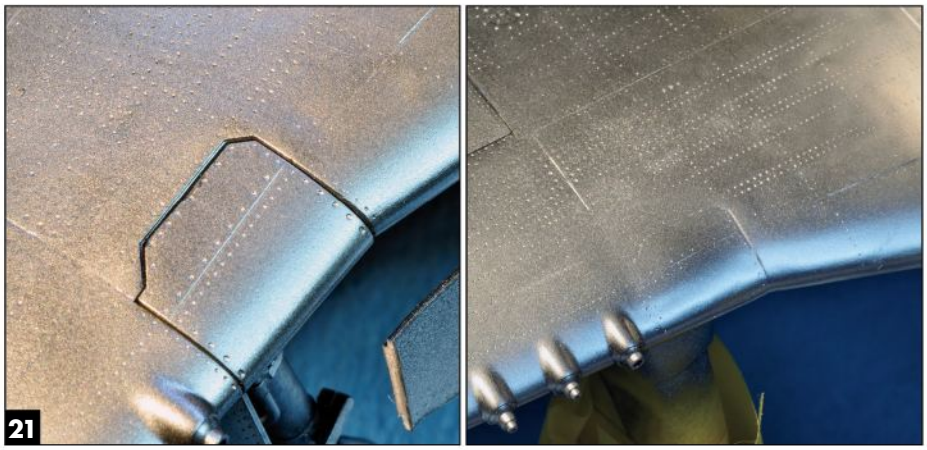
P-51D wings were puttied at the factory to improve laminar airflow. Chuck saw photos that showed much of this putty was partially removed or compressed slightly with wear, so he partially filled them by spreading Tamiya basic putty thinned with Tamiya lacquer thinner into the recessed detail with a cotton swab.



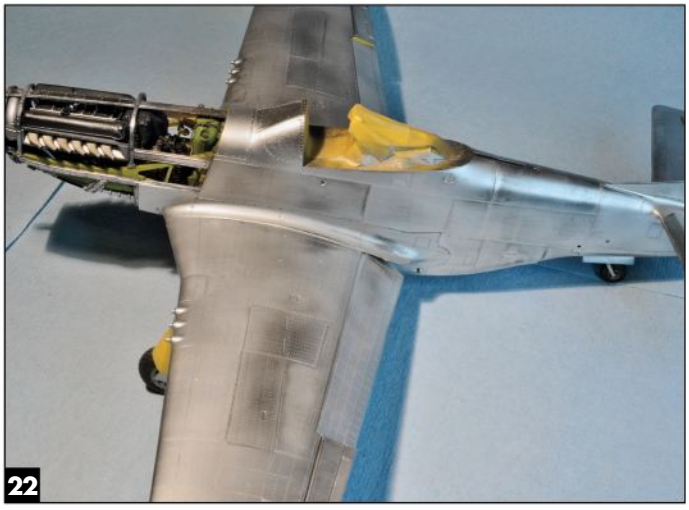
To show off all the detail in the open gun bays, Chuck upgraded to Browning M2 .50-caliber wing-mounted machine guns from Aires. "They even have the metal J-1 gun heaters for early models, and smaller J-4 heaters for later versions, as well as resin solenoids and breeches that can be left opened or closed," he says.

After masking, including sealing the gun bays with Micro Mask to hold them in place and leaving off the lower intake for ease of painting, Chuck primed with Krylon black gloss lacquer. He gave it a day to dry, then returned to sand out lingering imperfections. "This is the time to find flaws in construction and seam-filling," he says.

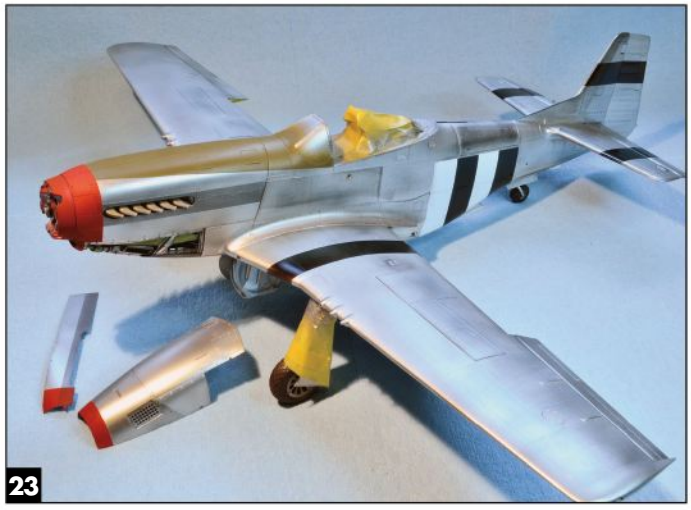
Instead of using the kit's molded scissor link, Chuck used only its metal cover and beefed it up with thin styrene. He turned the tiedown ring opposite the wheel so it is parallel to the ground.



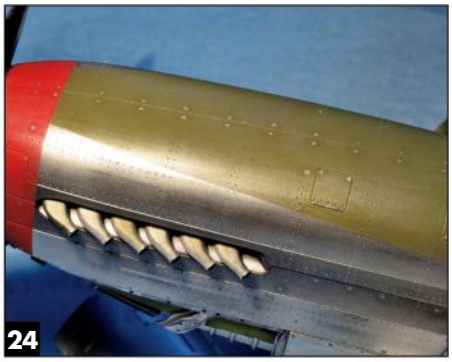
Again, the kit's option of retractable gear brings a scale problem: Leading-edge wing panels are held by magnets to hide the screws securing the gear to the wings. But the gap around this panel was huge (left). Instead, Chuck installed the gear legs permanently, masked them off, filled the gap with putty, then sanded it smooth and painted it.



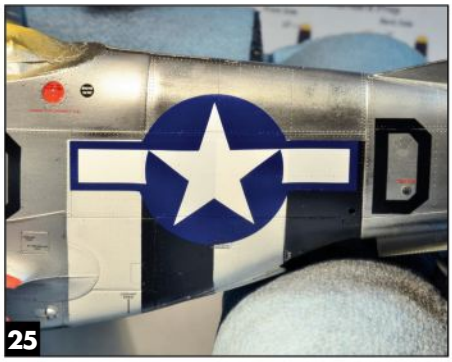
Chuck's Alclad II finish includes several aluminum shades — aluminum, duraluminum, dark, polished, white, airframe — plus steel. He used only aluminum on the wings for a dull, painted look, while the rest of the fuselage was brighter metal. After the paint dried for a day, polishing cloths emphasized different shades and revealed primer in places to replicate wear.



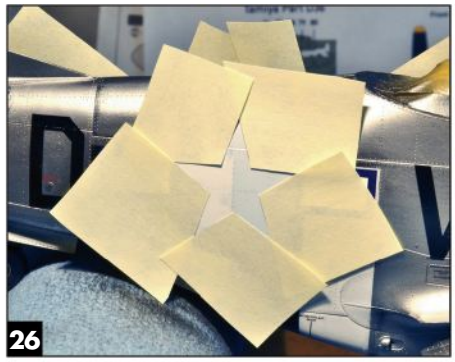
Invasion stripes, olive drab anti-glare panel, and red trim are painted with Testors Model Master enamels. Chuck chipped the stripes a little and sanded them lightly to eliminate paint ridges.



Dzus fasteners on the engine cowling are slightly raised on the kit parts, making it easy to buff them back to exposed metal, as they should be.



After a coat of Alclad II Klear Kote gloss prepared the surfaces, Chuck applied Fündekal and Zotz decals. Both behaved well, but the black invasion stripes showed through.



Chuck wanted to repaint the white, but masking tape would have endangered the decal. Low-tack Post-it notes were a safer bet. Thin, white lacquer minimized paint buildup, and the weathering that followed helped further disguise color bleed-through.

Thunder Bird's nose art spans four separate surfaces, two of which are removable. Chuck put all the panels on, placed the decal, and applied Micro Sol solution to sink it into the panel lines. After the decal had thoroughly dried, he used a new No. 11 hobby knife blade to carefully cut along the panel lines. One more dose of Micro Sol smoothed the decal cuts onto their panel edges.

After the decals were on, Chuck sealed and protected them with another coat of Alclad II clear. For mottled, weathered aluminum, he brushed on a 1:1 mix of table salt and water, gave it about an hour to dry, then airbrushed a fine mist of Alclad II smoke. When that dried, he gently removed the salt with a soft cloth dipped in warm water, rinsing often. Following with a light overcoat of Alclad II aluminum blended the effect.

Next came a Pro Modeller (now Flory Models) black wash, applied and then mostly rubbed off, to give depth to panel lines and rivets. Chuck avoided the wing tops to preserve the subtle effect of their puttied panels.

A light coat of Alclad II Klear Kote matte toned down the shine. Chuck hand-brushed a commonly seen airflow-swept oil stain over the wing using black artist's acrylic.

SOURCES

BarracudaCast resin details and BarracudaCals cockpit stencils and placards, Barracuda Studios, barracudacals.com
"Big Ed" photoetched-metal detail sets and masking set, Eduard, www.eduard.com
Browning M2 .50-caliber wing-mounted machine guns, Aires, www.aires.cz
Fabric seat belts, plywood floor decal, HGW Models, www.hgwmodels.cz
National insignia, nose art, Zotz sheet No. 32042, www.zotzdecals.com
Stencils/placards, Fündekals, www.fundekals.com

Chuck combined kit parts and BarracudaCast resin on the fronts and backs of the drop tanks. He left them bright white aluminum to reflect their one-time use. Chuck says, "After nine months and roughly 300 hours of work, *Thunder Bird* flies again! I added a lot to it, but to me this is the best aircraft kit in any scale — a stunner even straight from the box. I've already bought another!" **FSM**

1/350 Scale

Easy and convincing WATER

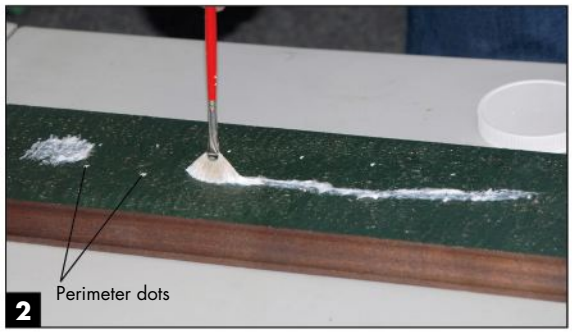
Fast and simple techniques to create realistic waves • BY TOM ALTOBELLO

To each individual, the sea looks a little different. However, I think my method of creating display bases for waterline models comes pretty close to mimicking the real thing.

All you need is a smooth, flat base appropriately sized for the ship you're modeling, clean ½" and ¼" brushes, heavy acrylic gel medium (I use Golden), and some paint.

Tom's 1/350 scale USS *Arizona* steams through a sea of heavy acrylic gel. All his simple technique requires is a suitable base, a bare minimum of supplies, and a little patience.

Wood bases give Tom's ships a decorative edge. He paints the top of the base dark green. Once the paint has dried, he applies heavy acrylic gel over the entire surface with a ½" brush. Don't worry: The gel goes on white but dries clear.

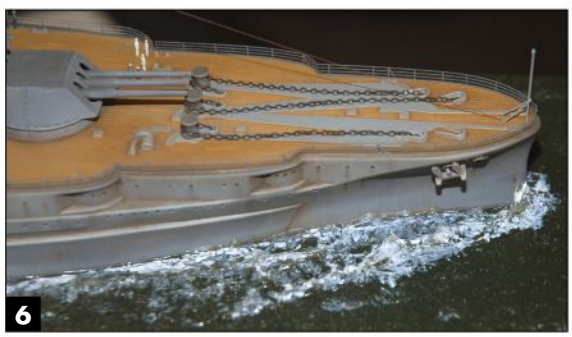


Once you've assembled your ship's hull, position it on the base and mark the perimeter with small dabs of gel medium 1-2" apart. Remove the hull and you should see its outline on the base.

Using a ½" brush, connect the dots with a thick line of heavy gel. This will permanently attach your ship to its base. Replace the hull and push it carefully, but firmly, into the gel.

Switching to a ¼" brush and working from bow to stern, form the gel into waves coming off the hull at a 20-degree angle. The gel should go on wider at the base and rise to peaks tumbling away from the ship. The waves should be 3-4" long.

Along the hull, form the gel into rolling, smooth disturbances that don't quite touch the hull (due to the ship's displacement). At the stern, work the gel into a froth to represent the wake.



Once the gel has dried, flow a mix of 1 part white acrylic paint and 5 parts thinner (or water) into the low areas of the waves. Highlight the tips of the waves with unthinned acrylic white paint to simulate whitecaps.

Remember, water looks different to everyone. With this technique, you're in control and can shape the water to suit you. **FSM**

Show Gallery

DUNCAN MacINTOSH
LONDON, ONTARIO, CANADA
Looking to try winter camouflage, Duncan employed hairspray as a paint-release agent to finish Hasegawa's 1/48 scale Bf 109F-2 as a JG54 commander's aircraft. He modified the Messerschmitt with clear-sprue wingtip lights, detailed wheel wells, a brass pitot tube, and a Cooper Details spinner.

2013 IPMS/USA National Convention

Hundreds of modelers brought their creations to Loveland, Colo., in August 2013, to participate in the International Plastic Modelers Society/USA's annual convention and contest. With almost 3,000 models on display, *FSM* editors Matthew Usher and Aaron Skinner had plenty to look at. Here are just a few of the scale masterpieces presented.

www.FineScale.com
To see more of these and other models from the show, visit FineScale.com/Online-Extras.

JIM MESKO
AKRON, OHIO
Jim describes AFV Club's 1/35 scale LVTP5A1 as a fun build, especially the challenge of weathering a flat-sided, one-color vehicle. In addition to Hobby Fan sandbags on the top deck, he detailed the .30- and .50-caliber machine guns. The crew, PSP panels, and a lot of the stowage came from Verlinden.

▲ MYRON SCHMIDT
NEWTON, KANSAS
To model the last X-3 flight, Myron detailed Lindberg's 1/48 scale Stilleto with scratchbuilt landing gear, gear-door actuators, inspection panels, NACA ducts, fuel-dump ports, external power port, FOD covers, wheel chocks, and and instrument panel. He surrounded it with an Accurate Miniatures tug; True Details power unit; and figures from Monogram, Revell, Lindberg, and Italeri.

◀ MICHAEL PORTARO
PARKER, COLORADO
"This car won the first Indianapolis 500 that I watched," says Michael of his 1/25 scale 1973 STP Eagle. The racer is a resin kit from Bill Jorgensen that Michael detailed with a 3D-printed drivetrain, engine, gearbox, suspension, rear wing, and fuel buckeyes. The colorful markings are from Indycals.

Show Gallery

RICHARD SLIWKA
WARRENSBURG, MISSOURI
Richard built Tehnoart's 1/192 scale *Sumner*-class destroyer as the USS *De Haven*, commissioned in March 1944. After adding detail to the model's radar dishes and 40mm guns, he applied Measure 32, Design 3D disruptive camouflage.

▲ **CARL McLAUGHLIN**
WINFIELD, ALABAMA
"I've always loved the color and flash of this era," says Carl about his 1/72 scale Revell P-26. "But areas of the model need some TLC." Starfighter Decals came to the rescue with resin details and replacement parts for the engine, cowl, and cockpit, as well as photoetched-metal flying wires. Starfighter also provided the markings for a Peashooter with the 94th Pursuit Squadron at Selfridge Field, Michigan.

▲ **ROB SCHMITT**
COLORADO SPRINGS, COLORADO
Working with a 1/6 scale resin kit from KitKong's Model Mansion, Rob painted Batman in a classic comic-book scheme using Testors Model Master and Com-Art acrylics.

▲ TIMOTHY KIRBY
ANCHORAGE, ALASKA

To complete Aoshima's 1/24 scale "Back to the Future" DeLorean, Timothy detailed the interior and engine with dozens of photoetched-metal pieces. Testors stainless steel Metalizer gives the body the right sheen. Timothy says he spent 246 hours on the car, but doesn't mention whether he went back in time to get it done for the show.

Show Gallery

BRYAN KRUEGER
DENVER, COLORADO
Receiving Tamiya's 1/35 scale 2½-ton 6 x 6 truck as a gift and finding Bronco's Fieseler Fi 103R — a manned V-1 — in a hobby-shop bargain bin spurred Bryan to do something different. He dressed up the American transport with details from Verlinden, and scratchbuilt a detailed cockpit and other parts of the flying bomb.

▼ JIM FRYE
NORCO, CALIFORNIA
Jim says Trumpeter's 1/35 scale SA-2 anti-aircraft missile transporter is a pretty good kit, but he wanted more detail on the big model. He plumbed and wired the engine, added hydraulic lines to the trailer, and opened the cab doors.

◀ KURT WOMACK
PRESCOTT, ARIZONA
Showing his enthusiasm for *FSM*'s sister publication, *Scale Auto*, Kurt converted Monogram's 1/25 scale Chevy 409 to a demolition derby car. After stripping the molded trim, he dented and rusted the body. He scratchbuilt the stripped interior, and added epoxy-putty welds, a gas can, and aluminum-tube exhausts. The hood and trunk are secured with model-ship chains.

▲ JON-PIERRE FURQUERON
ALLEN, TEXAS
Jon-Pierre, 11, accurized AMT's "Star Trek" Romulan Bird of Prey, angling the hulls sides and adding projections for the portholes. The ship is lit with LEDs and wears markings from JT-Graphics.

▲ JIM CLARK
SCOTTSDALE, ARIZONA
Starting with Hasegawa's 1/48 scale F-18F Super Hornet, Jim added aftermarket weapons, cockpit, refueling probe, and a boarding ladder. Marking it in a U.S. Navy low-visibility scheme, he painted the aircraft as a dirty, patched bird from VFA-2.

▲ JOE LoMUSIO
FULLERTON, CALIFORNIA
The fuselage wood grain on Joe's Wingnut Wings 1/32 scale Roland D.VIa started with a flat tan base, then light burnt umber sprayed through a photoetched-metal stencil. Next he brushed the planks with Winsor & Newton raw sienna artist's oils. After a short time, he wiped that in the direction of the wood grain. Two days later, he sprayed the fuselage with Tamiya clear orange. **FSM**

SCALE MODELING ESSENTIALS

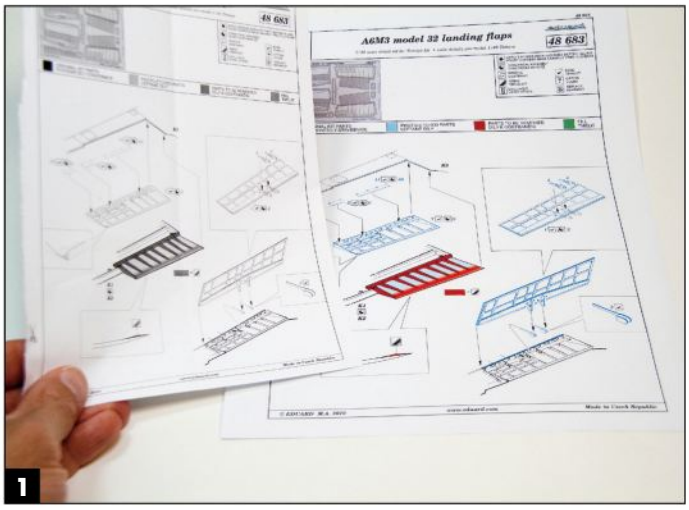
Making a GOOD ZERO BETTER

Part 2: Assembling and painting photoetched-metal flaps

BY AARON SKINNER

With graceful lines and a reputation as a tough opponent, the Mitsubishi Zero is a popular modeling subject. Aaron finished his A6M3 as the mount of Japan's highest scoring ace, Hiroyoshi Nishizawa.

When I built Tamiya's terrific A6M3 Zero, I wanted to use a little photoetched metal to take the model to the next level. Last month, I modified the kit's cockpit to accept colored details from Eduard. In this installment, I replace the kit's flaps with a set of Eduard parts. The process involves wholesale modification of plastic parts, complex bending, and detail painting.

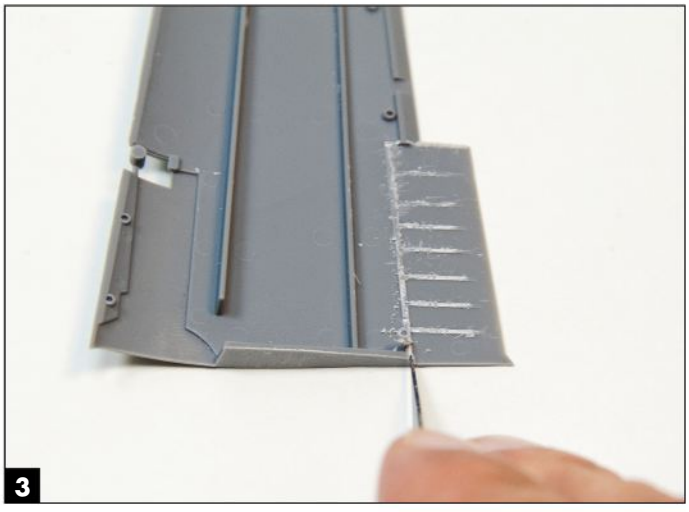


1

The directions that came with the flap set are black and white, but I downloaded color instructions from www.eduard.com before getting started. It clarifies some steps — especially what needs to be removed.

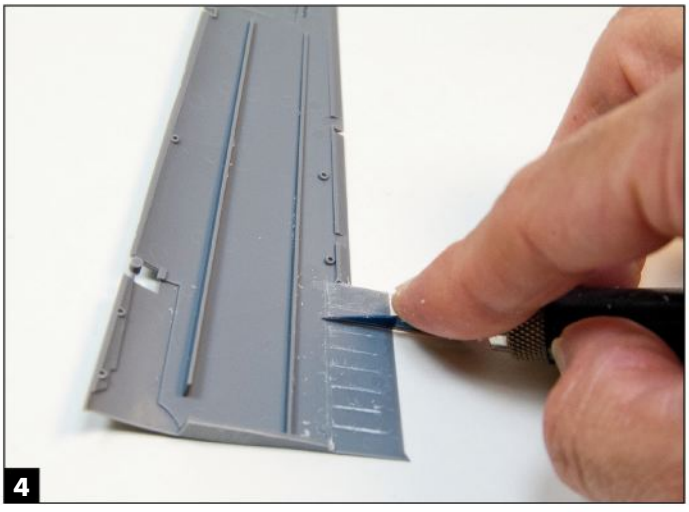
2

Before adding the wing structure above the flaps, I eliminated the molded detail from the plastic parts. I started by clipping away most of the plastic with a pair of side- or sprue-cutters; they do the job with minimal risk of damage to the surrounding surfaces.



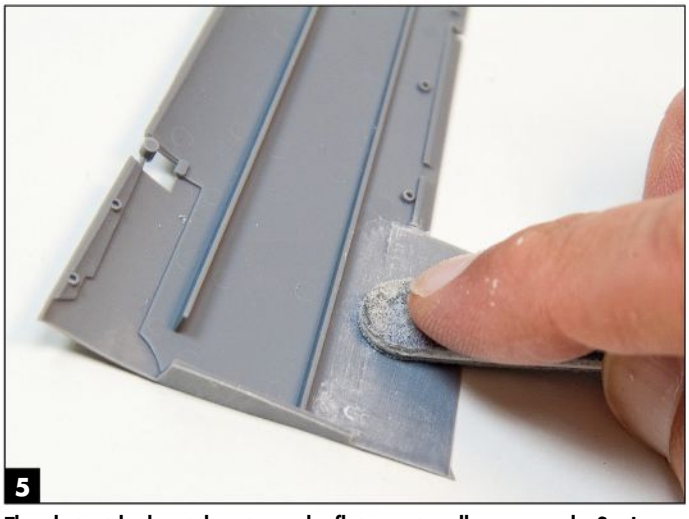
3

To properly fit the new parts, I had to trim and square up surrounding ridges with a sharp hobby knife. Press down firmly but gently to shave off the part without penetrating the wing surface.



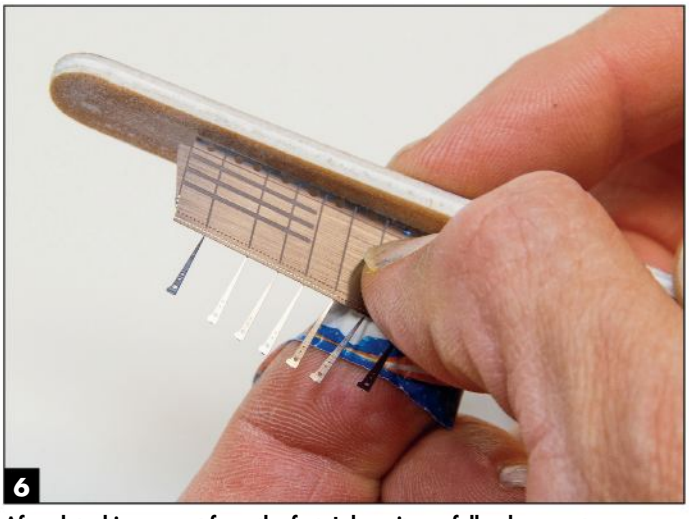
4

Next, I dragged the edge of my knife across the remains of the raised detail, shaving them down a little at a time. Be sure to hold the blade perpendicular to the surface so it doesn't slice into the plastic.



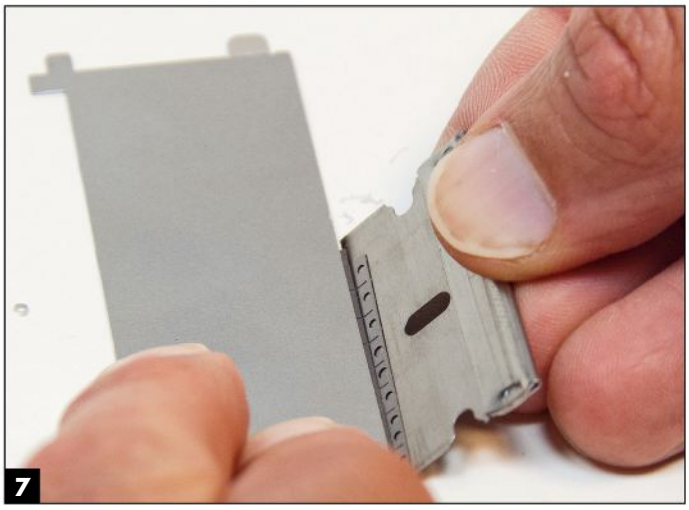
5

The photoetched-metal parts need a flat area to adhere properly. So, I finished by sanding the area smooth with a coarse sanding stick.

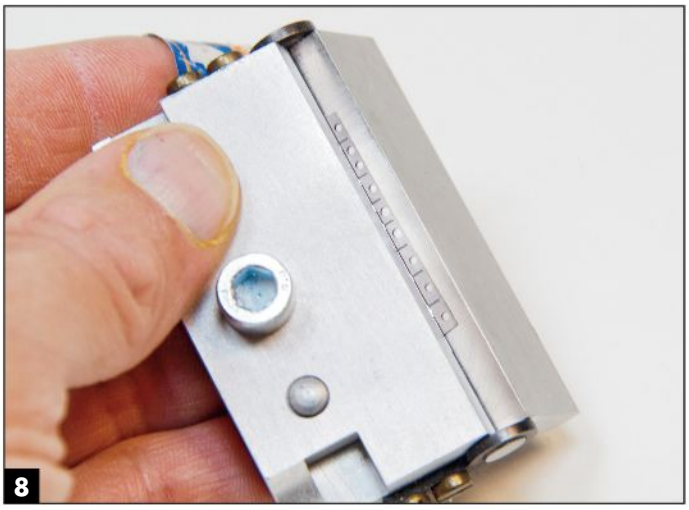


6

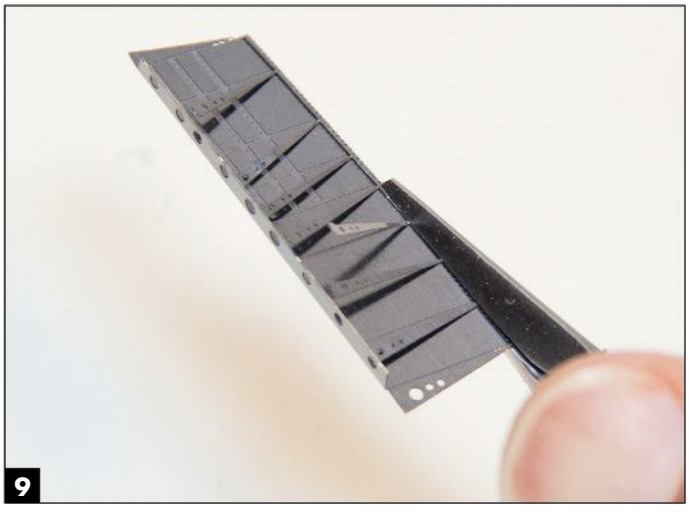
After detaching a part from the fret, I drew it carefully along, not across, a sanding stick to remove burrs. The parts are thin and delicate, so handle them gently to avoid bending.



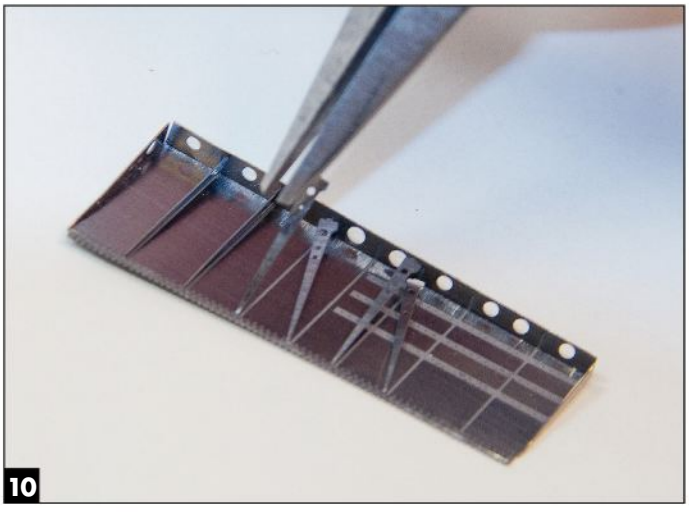
For long folds like the front edge of the flap boxes, I place a metal straightedge at the bend. Then, I slide a razor blade under the edge of the part and smoothly pry it up.



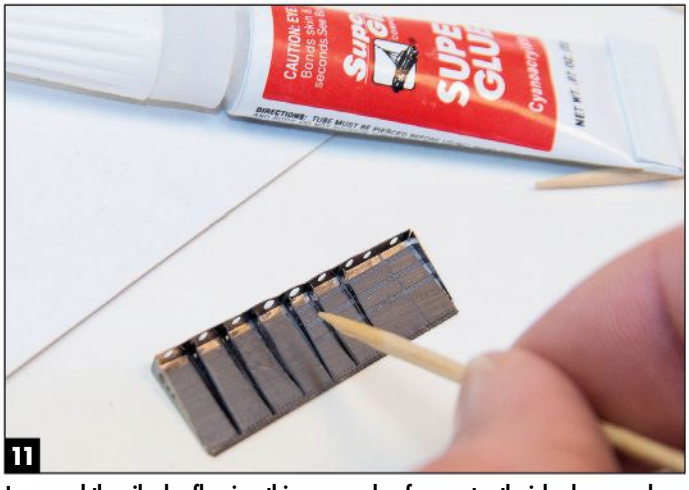
An elbow bender makes a great alternative to a razor blade. Simply clamp the part into the bender with the fold mark at the edge, then fold the part. These tools are safer than the razor-blade option and produce uniform bends.



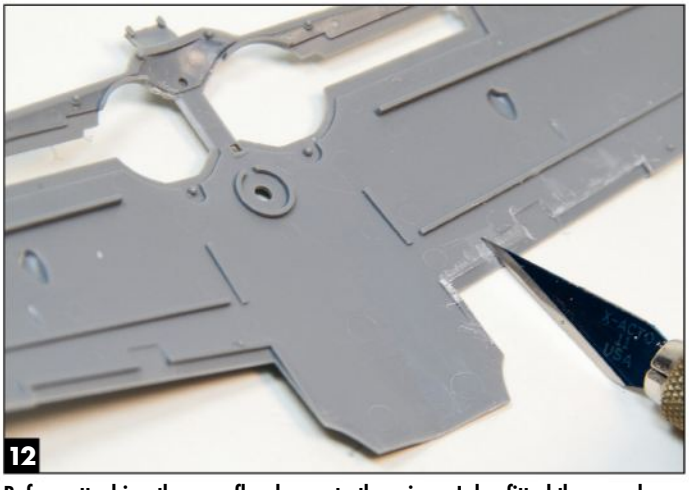
For other bends, I use smooth-jawed pliers to make the folds and crimp the parts. Don't use standard needlenose pliers; they can damage thin photoetched metal.



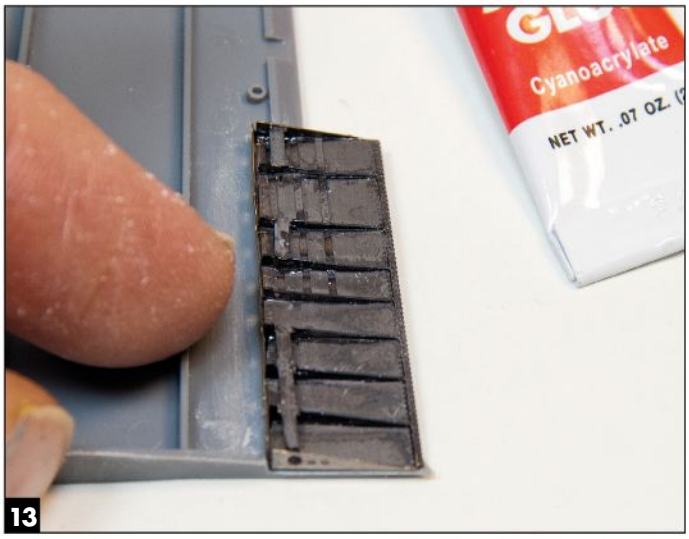
Each of the flap-box frames needs to be turned 90 degrees and fitted into engraved slots before gluing — use tweezers or smooth-jaw pliers. Don't bend any piece too many times or the tiny connection point will break.



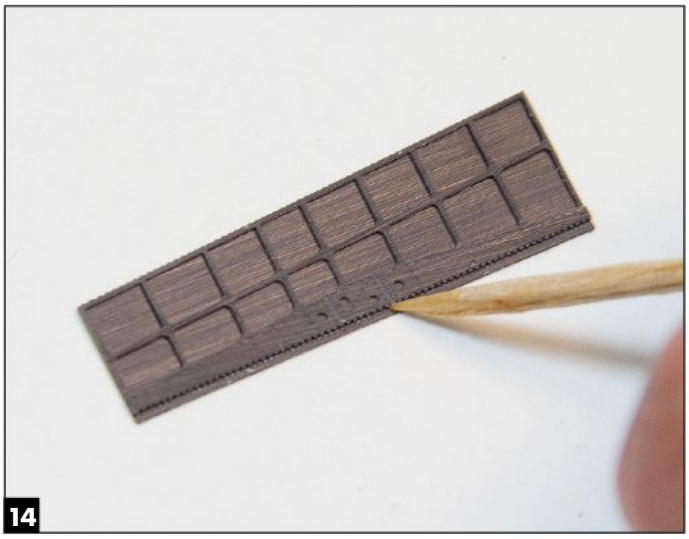
I secured the ribs by flowing thin super glue from a toothpick along each join.



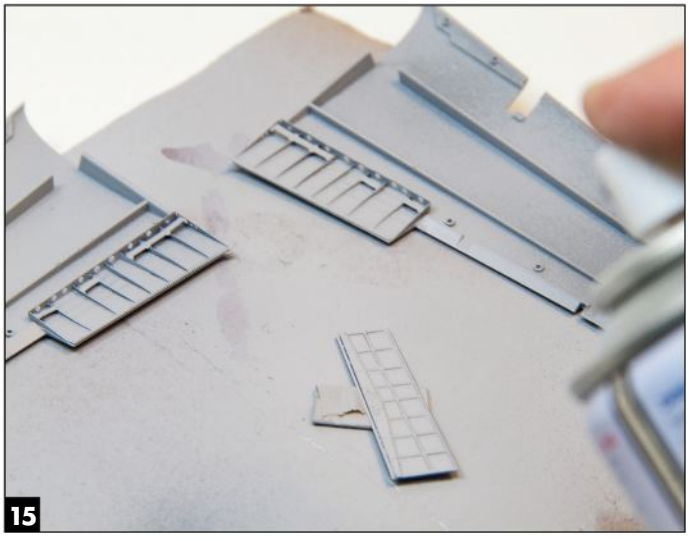
Before attaching the new flap boxes to the wings, I dry-fitted them and discovered that the box locators on the lower wing needed to go. (This was not mentioned in the instructions.) I cut, scraped, and sanded the areas flush.



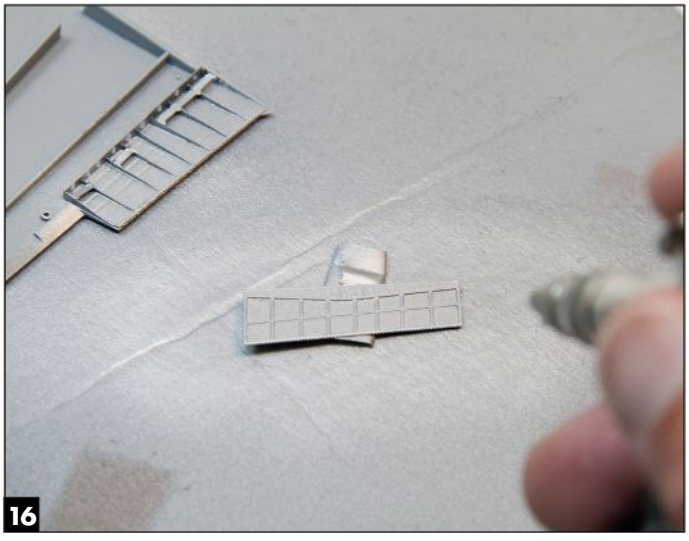
13 Further deviating from the instructions, I attached the boxes to the upper wing halves rather than the lower. I found it easier to align them this way.



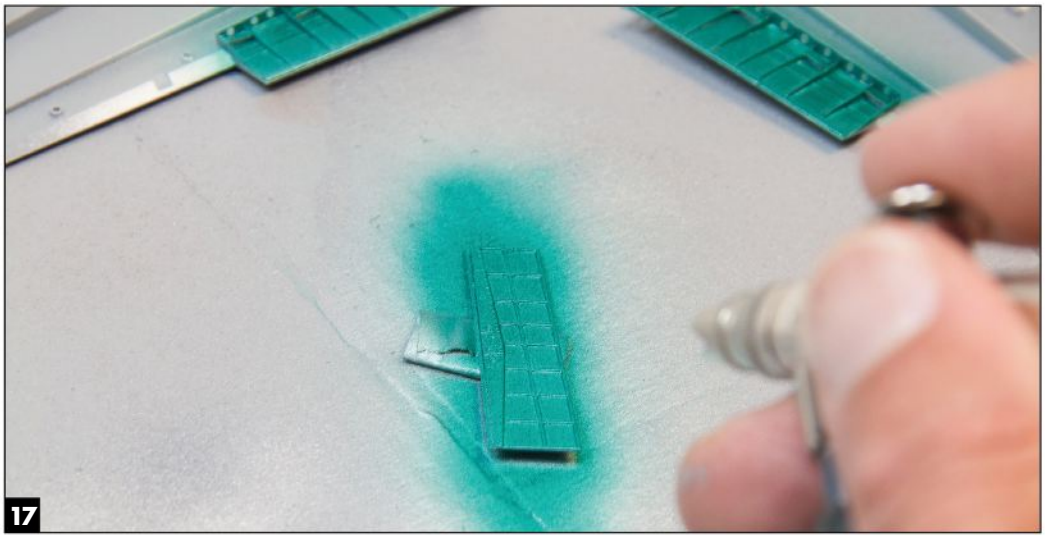
14 The flaps were much simpler than the boxes, requiring just four folds. I flowed thin super glue along the joins.



15 Paint, especially acrylic, doesn't adhere well to metal. So, I sprayed the photoetched-metal parts with Tamiya Fine Surface Primer.



16 The Zero's internal structures were protected from corrosion by a distinctive blue-green varnish. I started the painting process by airbrushing the flap structures and wheel wells Tamiya flat aluminum (XF-16).

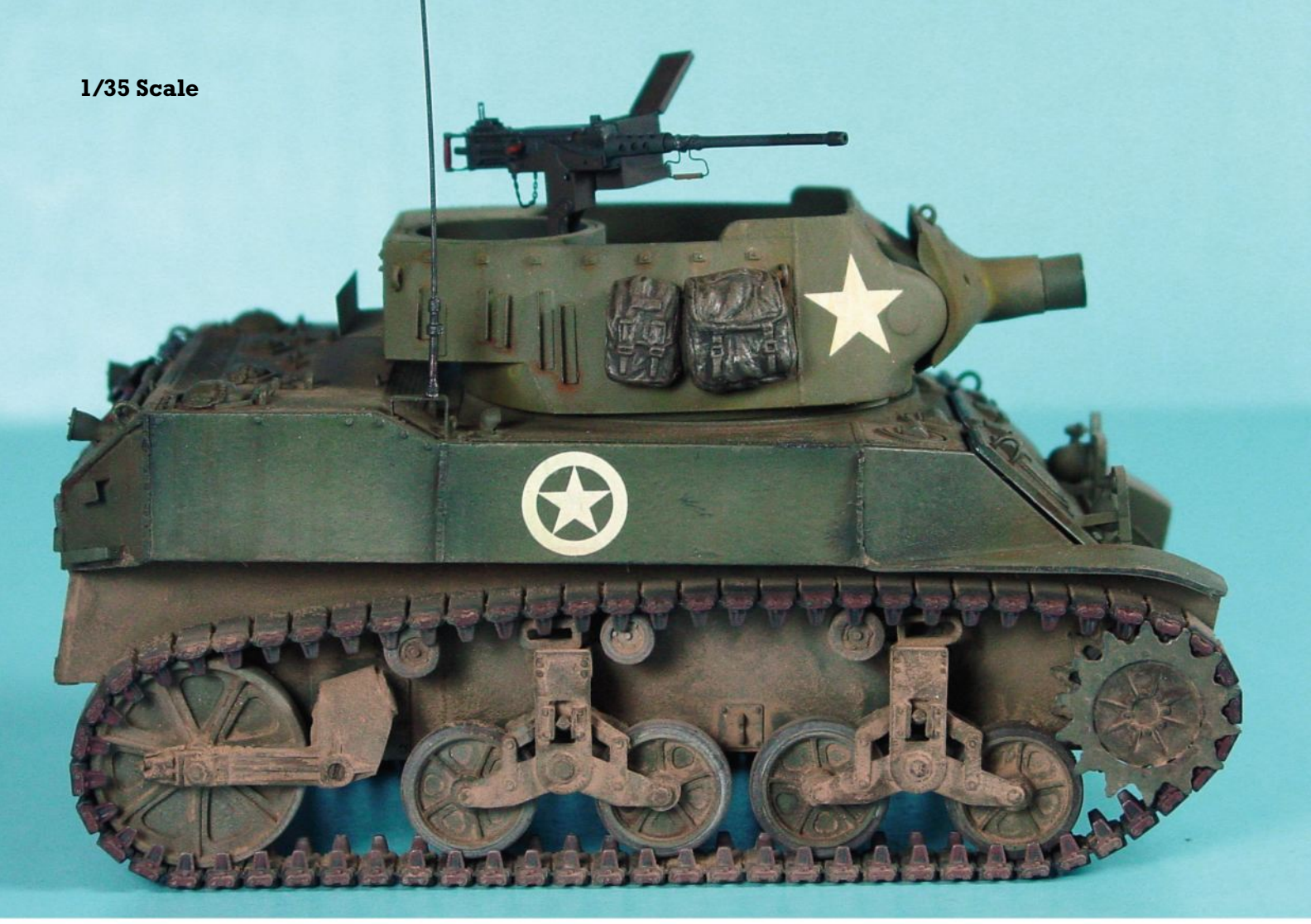


17 I mixed equal parts Tamiya clear blue (X-23) and clear green (X-25) and clear (X-22). I cut the mix with an equal measure of Tamiya thinner, then airbrushed the parts. **FSM**

COMING UP: PART 3

In the February 2014 *FSM*, Aaron airbrushes the A6M3 with field-applied camouflage and adds the last details.

1/35 Scale



The U.S. 75mm HMC M8, sometimes called the M8 Scott (after American general Winfield Scott, of 1812 and Civil War fame), was widely used as an infantry support gun. Built by Cadillac on the M5 Stuart chassis, 1,778 were produced from September 1942 to January 1944.

SUPERDETAILING an old kit

Moves to improve Tamiya's HMC M8

BY ERNESTO URTIAGA

Tamiya's 1/35 scale U.S. Howitzer Motor Carriage M8 has been around for many years. It's an old kit and has its errors, but I still like it well enough to take the time and make the effort to superdetail it. I used two sets of Eduard photoetched metal and a Verlinden resin interior set — and, since it's a shame to hide all that detail, I left the front plate removable to offer a view of the rarely seen interior.

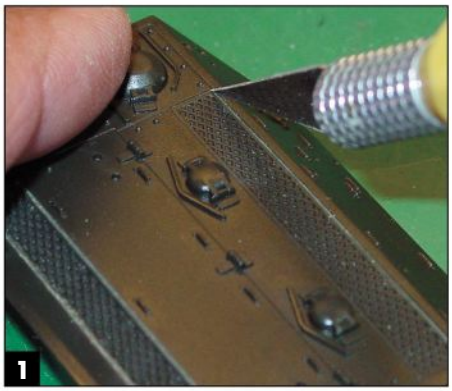
Upper hull

To use photoetched-metal engine screens, I had to remove the molded ones from the hull. I scored repeatedly with a No. 11 blade to remove the plastic, **1**, then installed the screens, **2**.

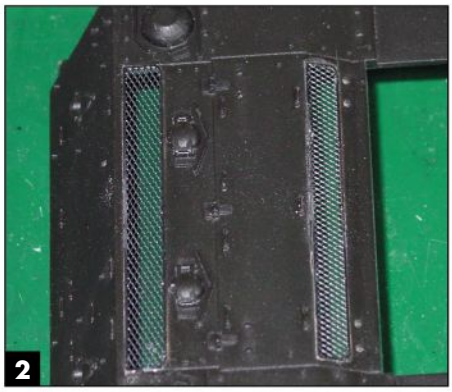
I sanded off other molded details and thinned the hull's underside with a sanding stick to give its edges a more-to-scale appearance. To make room for the resin interior, I removed much of the plastic overhanging the fighting compartment, cutting at the corners with a razor saw, **3**, and removing the rest with a cutting wheel in a motor tool.

The hull sides and rear plate were missing weld seams and six bolts on each side; I made those with stretched sprue, **4**. A sanding stick lowered the profile of both the bolts and the weld seams.

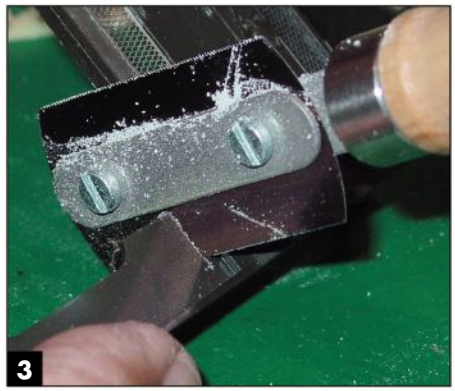
Somehow, I lost the rear hull plate; I had to replace it with sheet styrene, **5**.



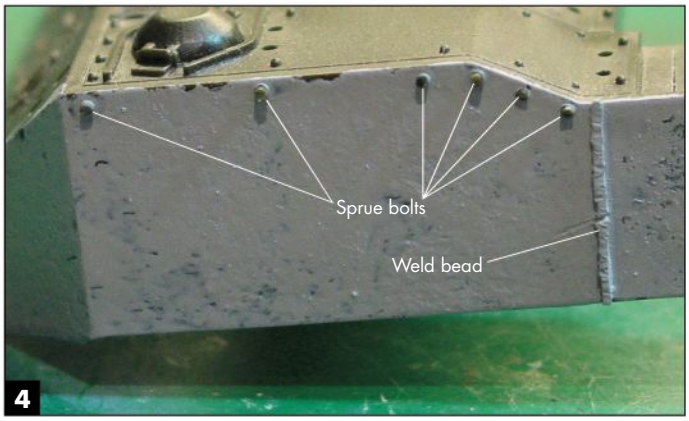
Making way for photoetched metal, Ernest repeatedly scores along the edges of the molded engine screens to remove them.



The finer photoetched-metal mesh makes the change worth the effort.

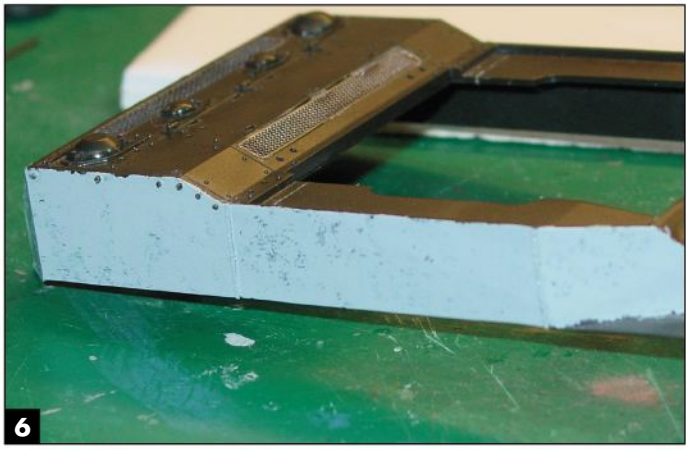


A razor saw removed plastic to make it easier to fit the resin fighting compartment still to come.

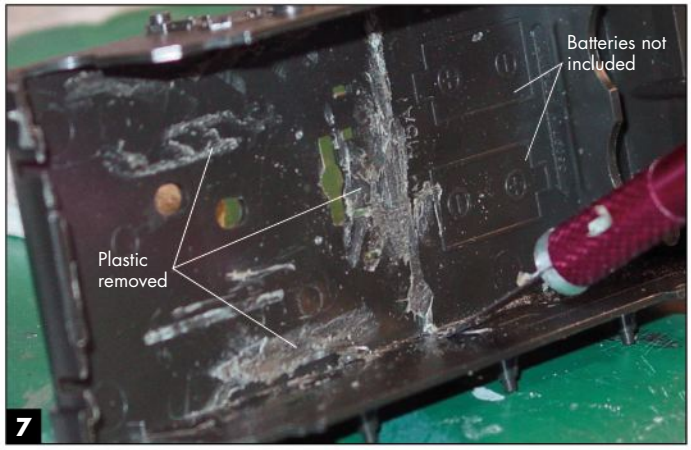


Stretched sprue takes several forms — here, as bolts and a weld bead. For the latter, Ernesto softened a strip of sprue with styrene cement and sculpted it with a flathead screwdriver.

When the hull's rear plate mysteriously went missing, Ernesto made a new one from white sheet styrene. Putty shows where hull details were removed or filled in. Note the softened-sprue weld beads.



Stippled Mr. Surfacer 500 (the light color) replicates rough, cast surfaces.



Initially a motorized kit, Tamiya's molding still includes battery-retaining structures — or did until Ernesto got after it.

Brushing on and stippling a layer of Mr. Surfacer 500 produced a cast texture on the smooth plates, **6**.

I sliced off molded tie-downs and super glued copper-wire replacements.

Lower hull and interior

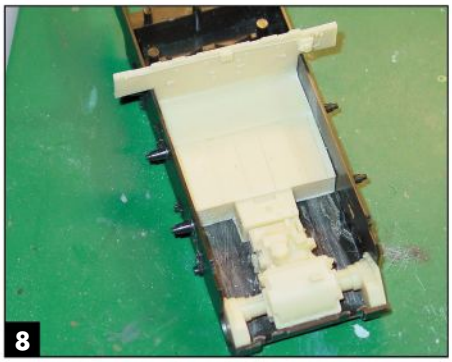
Like many old Tamiya armor kits, this one was originally motorized. I had to cut away interior moldings to make room for the resin, **7**. I adjusted the resin components to fit, **8**, then super glued most of the interior tub, transmission, forward sponsons, and rear wall. Underneath, I filled and smoothed motorization holes with putty, **9**.

Open sponsons were another characteristic of old Tamiya kits; I cut plastic card to seal the rear sponsons, **10**. I folded and attached photoetched-metal exhaust vanes per the Eduard instructions, **11**.

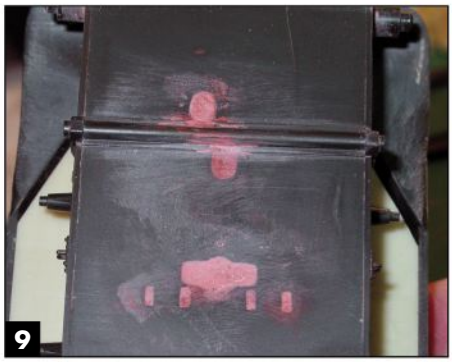
Interior painting

I began painting the inside by priming with Floquil engine black.

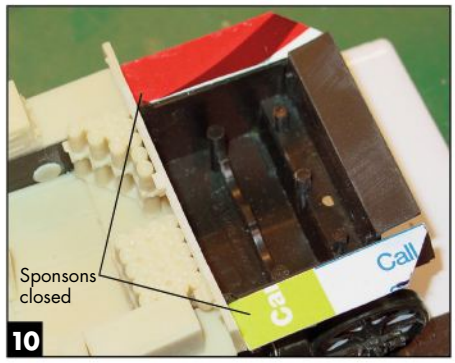
The interior of American open-topped armored vehicles was olive drab where visible from above, but I painted the forward area with Testors flat white, **12**. When these paints had dried I applied a wash of burnt umber artist's oil to depict heavy foot traffic. Lightly dry-brushing with Vallejo



Through test-fitting, sanding, filing, and fiddling, taffy-colored resin finds a home in the hull.

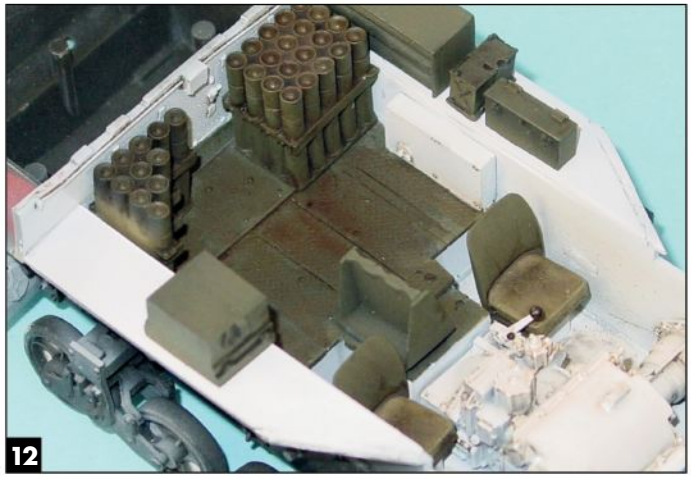


No more batteries, no more motor, no more switches, no more holes in the hull: Ernesto filled them with putty and sanded them smooth.

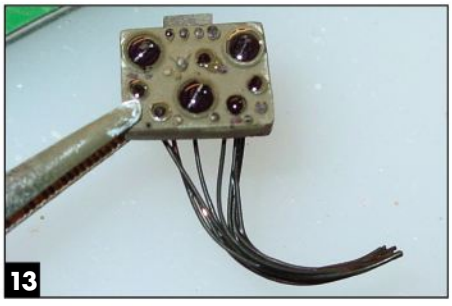


Another characteristic of old Tamiya armor kits: open sponsons. Ernesto cut and fitted plastic card to block the openings.

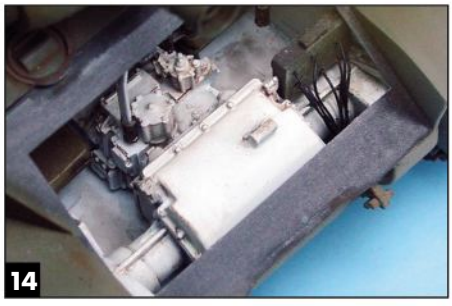
Photoetched metal, folded according to instructions, dresses up the air deflectors on the hull rear.



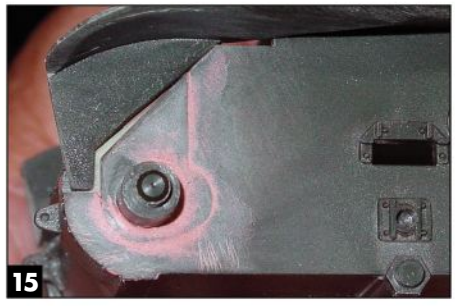
If it was visible through the turret opening it was olive drab, but under the plates Ernesto used Testors flat white. Washes of burnt umber artist's oil revealed details and showed wear on the floor.



Ernesto detailed the dashboard by attaching fine wire, painting it and the instruments black, picking out raised details on the dials with a white pencil, and glassing them over with Testors Clear Parts Cement & Window Maker.



After snaking the wiring to its "terminals," Ernesto dirtied up the white areas with a burnt umber wash.



Finally, the upper and lower hulls are joined — sort of. Gap-filling super glue and putty help fill flaws and voids in a less-than-ideal fit.

khaki acrylic paint emphasized the floor's diamond pattern.

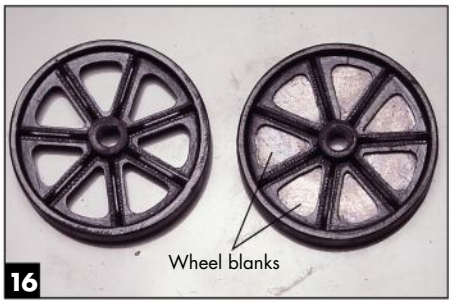
I painted the control panel and, because I knew it would be seen because I was making the front plate of the vehicle removable, I drilled behind each instrument and inserted thin copper wire to represent a wiring harness, **13**. I cut the copper wires to an appropriate length, painted them Vallejo black, carefully bent and arranged them to fit under the transmission housing, then fixed them in place with tiny drops of super glue, **14**.

Then, I joined the top and bottom hulls. Wide, ugly gaps on the sides were partially filled with thick super glue, then smoothed over with putty, **15**.

Drive sprockets and wheels

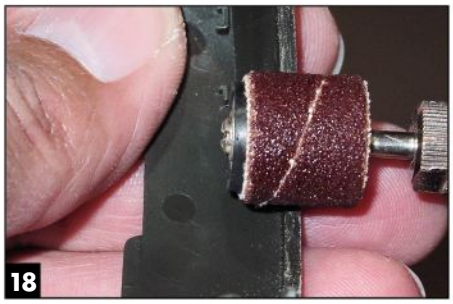
Early M8s had open-spoke running gear, but that was eventually replaced in the field with a solid style. Some field modifications were made by welding metal plates to the open spokes; surfing the Internet for photos, I saw combinations of both. The Eduard photoetched metal includes pie-slice conversion pieces for the idlers and drive sprockets, **16**, but none for the road wheels (although you can use sheet styrene for that if you want). I converted all the running gear just to make it a bit different.

Each of Tamiya's rubber band tracks fit like a glove around its sprocket.

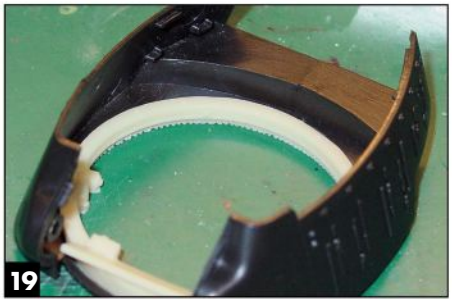


Eduard provides photoetched metal so you can modify Stuart running gear in the field to model later vehicles.

More kit detail removed, more putty to fill it in and smooth it over.

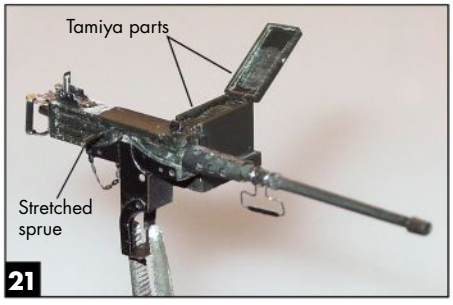


A motor tool makes quick work of opening the turret ring for an aftermarket turret gear — but easy does it! Low speed is advised.

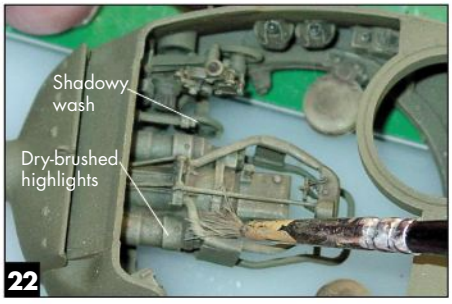


Success! Verlinden's resin turret gear looks great in its place.

Verlinden's resin gun is an improvement over the kit-supplied weaponry. Ernesto used thick foil and bits of stretched sprue and styrene to dress it up with other little details.



Bright photoetched metal attached with thin super glue dresses up the kit's "Ma Deuce." Ernesto used kit parts for the ammo box and tray. Other bits are stretched sprue.



Flat black primer, olive drab overall, and lightly dry-brushed khaki bring out details in the turret.

Seeing the turret interior from below reveals the pre-shading effect of black primer mimicking the play of light. Rubbing the turret-gear teeth with a pencil replicates bared metal.

Flat black Rust-Oleum adhered well to Tamiya's vinyl tracks. Darkened rust with a bit of silver, plus a pencil rub, called out metallic details.

Turret

To make way for photoetched-metal details bound for the turret, I removed all molded exterior details, filled holes with putty, and sanded them smooth, **17**.

Using a sanding drum on my motor tool and running it at low speed, I carefully removed part of the molded turret ring, **18**, and replaced it with Verlinden's resin turret gear ring, **19**.

The Verlinden set brings a really nice 75mm gun to replace the one the Tamiya kit supplies, **20**. All the resin pieces were secured with thick super glue. I glued stretched-sprue supports under the turret roof to keep it from sagging under the weight of the .50-caliber machine gun. Stippled Mr. Surfacer 500 enhanced the turret's cast texture.

Ma Deuce

Though the Verlinden set provides a Browning M2 ("Ma Deuce") .50-caliber machine gun, I wanted to use the Eduard photoetched-metal details that were designed for the Tamiya part, **21**. After shaving off most of the molded details on the receiver and barrel and sanding them smooth, I drilled out the muzzle with a pin vise. The Tamiya ammo box and tray looked better than the photoetched metal, so I used those kit pieces.

Ma Deuce was "parkerized" (a protective finish, as in bluing) in a gray/green shade, so I airbrushed Vallejo green gray darkened a little with a tiny drop of black. I brush-painted the mount, cradle, ammo box, and feed tray with Testors olive drab, and I lightly dry-brushed the ammo belt with Humbrol metallic brass enamel. The grips and charging handle are painted with Vallejo new wood; an overcoat of Tamiya clear orange acrylic produced a deeper wood tone. A final hand-brushing with a flat clear knocked off the shine.

Exterior painting and decals

I primed the turret interior with Floquil engine black, then sprayed Testors olive drab enamel. A wash of burnt umber artist's oil deepened recesses; light dry-brushing with Vallejo khaki made raised details pop out, **22**. Rubbing a No. 2 pencil on the turret gear added a metallic sheen, **23**.

The same order of painting followed on the exterior; Floquil engine black served as both a primer and a pre-shade. I sprayed Testors olive enamel more heavily in panel

25

No, it's not a turret on a clown car: Bright bits of artist's oils begin the process of applying a "dot filter."

26

Using a brush damp with thinner, Ernesto draws the oils down the turret sides …

27

… until the colors are almost gone. Subtle remnants depict weathering and lend variety to an olive drab finish. Subsequent washes further blend these shades.

28

Brushing on a mix of alcohol and weathering powders muddies up the suspension and lower hull. When it dries, you can either add more or brush it back off as you please.

centers, allowing some of the black to show on the outer edges and vary the solid green.

I set the newly painted parts aside for a couple of days before brushing Future floor polish in spots I wanted to decal. This will give you a better bed for decals. But be sure to give the Future two or three days to dry before proceeding to ensure that it doesn't turn hazy when you apply decal solution.

After I apply the decals, I spray two more light coats of Future to seal them. Finally, a coat of Testors Model Master Acryl flat clear kills the Future gloss and creates a barrier coat for the weathering and washes to come.

Track

To paint Tamiya's "rubber-band" tracks, I decanted Rust-Oleum flat black spray paint (specially made to bond to plastics) for my airbrush and gave the tracks several light coats. Even after flexing and bending the track, the paint did not flake off!

A couple of hours later, I mixed Testors rust enamel with a hint of silver and black and brushed the guide horns and outer track parts. The next day, I used a No. 2 pencil to highlight guide horns, outer track edges, and drive sprocket edges to depict worn metal, **24**.

Dot filtering, weathering

I wanted my M8 to look used but not abused. I started with dot filters, **25**, using artist's oils to vary the olive drab and add depth to the finish. After applying small dots of orange, white, burnt umber and green oils, I streaked them down with a soft brush loaded with thinner, **26**.

Continue until most of the paint is removed and only a subtle hint of the shades is left, **27**. (All this thinner is why you needed that earlier barrier coat to protect the underlying paint.)

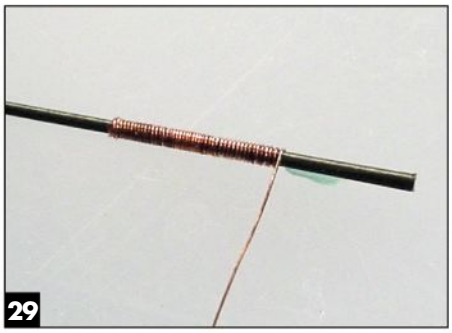
I applied several washes of tan and burnt umber artist's oil to the hull and turret. For the lower hull, I mixed rubbing alcohol with dirt-colored MMP weathering powder to make a soupy mix I applied to the hull underside, lower hull sides, and running gear, **28**. A light, dry dusting of the same weathering powder evened things out.

More details

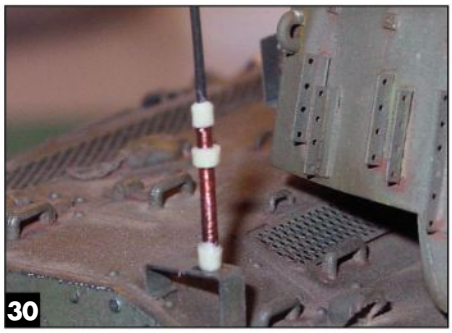
The Tamiya kit does not provide an antenna, so I made one: I stretched sprue until I obtained a taper at one end, then coiled thin copper wire around the lower antenna body, **29**. Wrapping thin strips of masking tape around the coil gave me fittings like the ones I saw in pictures, **30**. I smeared thin super glue over the wire to hold it, wicking off excess glue with the corner of a paper towel.

I hand-brushed the antenna with Alclad II steel. (Yes, you can do that — I also brushed metal parts of tools with it.) When it dries, you can polish it for a little more sheen. I painted the tools and installed them on the hull, **31**.

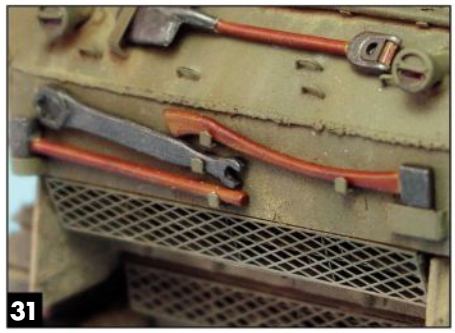
I drilled out the headlights, painted their insides Humbrol chrome silver, then filled



To make an antenna, Ernesto wrapped fine-gauge copper wire around a tapered segment of stretched sprue …



… and wrapped thin strips of masking tape to represent fittings he saw in pictures. A drop of thick super glue attached the antenna to the photoetched-metal bracket beneath it.



Wood handles are Vallejo new wood over-coated with Tamiya clear orange. After a coat of Testors clear flat dulled the shine, the tools were attached with a strategically placed drop of thick super glue.

For headlights, Ernesto drilled out the kit parts, painted their insides Humbrol chrome silver, and formed lenses with Testors Clear Parts Cement & Window Maker.

It's a tiny part, but Ernesto put a lot into this fire extinguisher, including a die-cut decal for a gauge, a drop of Clear Parts Cement for the gauge's glass, and a pinwash to deepen details.

The fighting compartment displays resin add-ons, clean construction, and careful painting.

them with Testors Clear Parts Cement & Window Maker for lenses, **32**.

I painted and dry-brushed stowage bags from my spares, then hung them on the turret. Replacing the kit's fire extinguisher with the resin one from Verlinden, I hand-brushed the cylinder Vallejo red and the top assembly Alclad II aluminum, **33**. Clamps are Testors olive, while the gauge is Vallejo black. I used a Micro-Mark mini-punch to cut a face for the gauge from a spare decal sheet. The extinguisher is attached to the back wall of the fighting compartment.

Ammo cartridge cases are painted with Testors Model Master brass; projectile parts are Alclad II steel. All six rounds are super glued to the front ammo rack, **34**.

Finally, once I super glued the machine gun topside, my M8 was fully armed and ready for action. **FSM**

SOURCES

Resin interior set, Verlinden No. 1635, www.verlindenonline.com

Photoetched-metal detail sets, Eduard Nos. 35139, 35530; www.eduard.com

Once Ernesto had mounted his machine gun atop the turret, his M8 was off to battle.

With a penchant for modeling the unusual, Carl transformed Italeri's 1/72 scale Douglas B-26B Invader into a Cold War-era drone controller complete with scratchbuilt Firebee drones and a high-visibility color scheme.

A DB-26C Invader in DAY-GLO

Convert a wartime bomber into a drone controller

BY CARL KNABLE

Redesignated B-26 in 1948 (and often confused with the Martin B-26 Marauder), the Douglas A-26 Invader saw service in World War II, Korea, and Vietnam. In the 1950s, the U.S. Air Force modified some B-26Cs as drone director aircraft. This meant stripping out the guns and adding special mounts on the wings for the drone pylon.

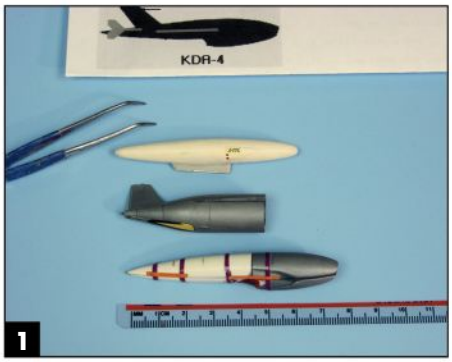
As a DB-26C, the plane typically carried two Ryan Q-2A Firebee drones. The drones were used for live-fire testing of new air-to-air missiles and as aerial targets for pilot proficiency training.

Primarily painted white to dissipate the infernal heat of the desert Southwest where they were based, the DB-26 drone directors also wore high-visibility colors like much of the rest of the '50s U.S. air fleet.

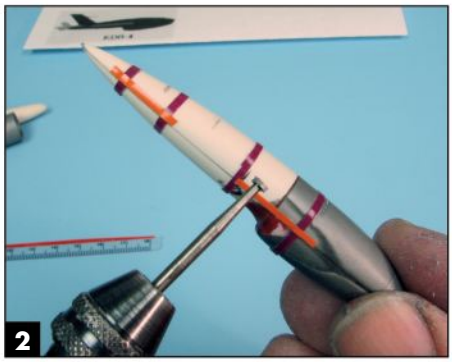
A picture from *A-26 Invader In Action* (Squadron/Signal Publications, ISBN 978-0-897-47296-8), Page 41, inspired this build. In it, a number of DB-26Cs are lined up at the 1957 William Tell aerial gunnery competition.

I chose Revell's reissue of Italeri's 1/72 scale B-26B Invader as my starting point because it has a nice amount of detail, recessed panel lines, and is fairly simple to build.

However, it turned out to need a good deal of modification — not to mention building the Firebee drones.



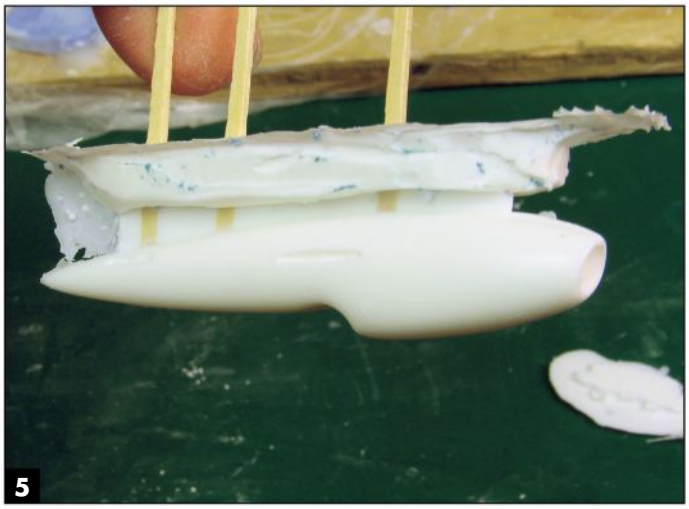
Carl started with the Firebee drones, which he wanted to cast in resin. After finding a profile view and dimensions on the Internet, he reduced them to 1/72 scale and built the drone's body from the front half of a Hawk 1/48 scale T-33 wing tank. The rear is made from a tank out of his spares box.



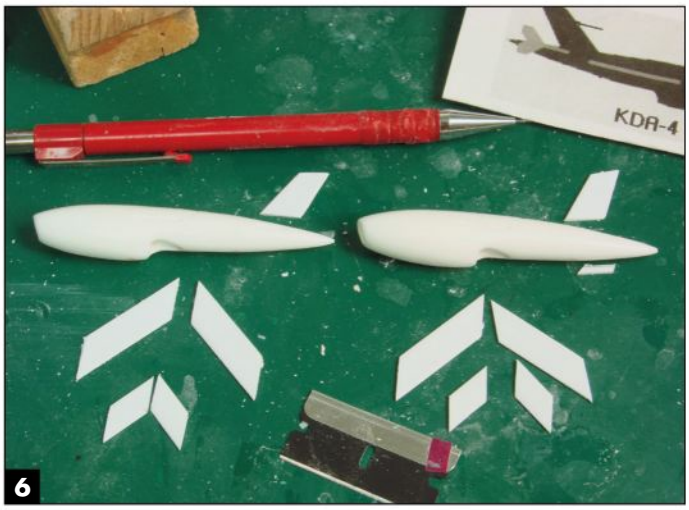
Strips of 3M electrical tape marked the wing and stabilizer positions. Carl cut attachment grooves with a motor tool and Dremel high-speed cutter (No. 199).

After covering the Firebee body with auto primer and sanding it smooth, Carl super glued a piece of sheet styrene to serve as a support during the mold-making process.

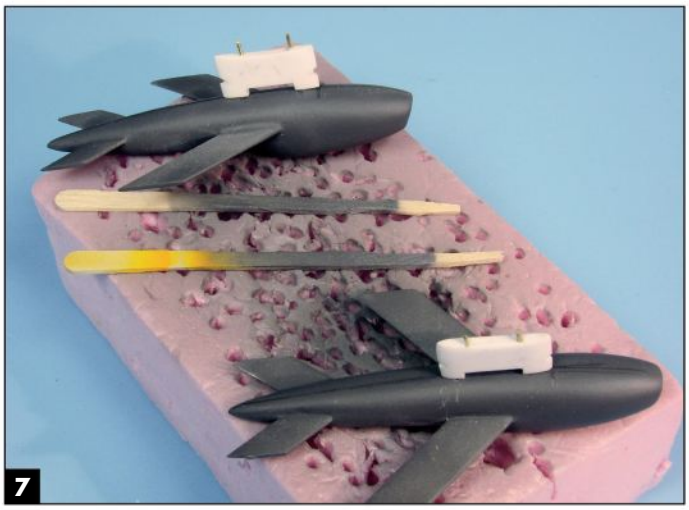
To make the mold, Carl set the drone master and a plastic surround in clay. He mixed two-part room-temperature-vulcanizing (RTV) silicon rubber and poured it into the surround.



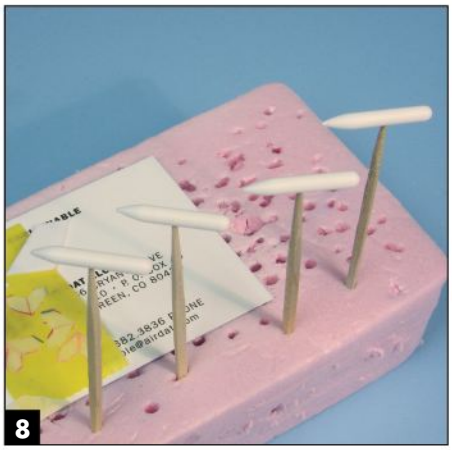
Once the silicon mold cured, Carl popped the master out and cast two drone bodies in two-part liquid resin. Note: To see how to make a silicon mold and resin parts, visit www.FineScale.com/HowTo.



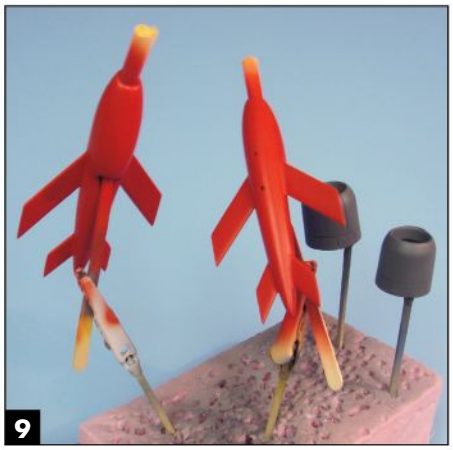
The Firebee wings and tail surfaces are made from sheet styrene. Carl sanded each piece to give it the shape of an airfoil.



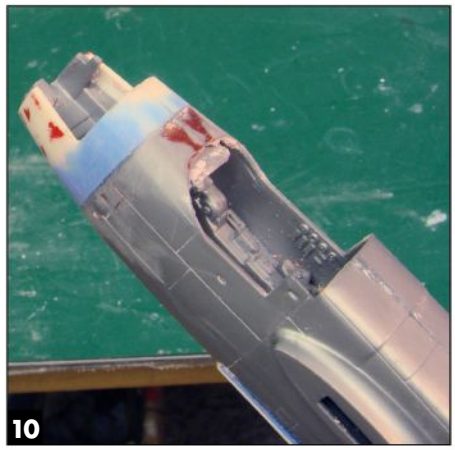
The Firebee fuselages got a good sanding before the wings and stabilizers were super glued in place. Carl then went over the assembly with auto primer and added pylons made from sheet styrene with brass pins for locators.



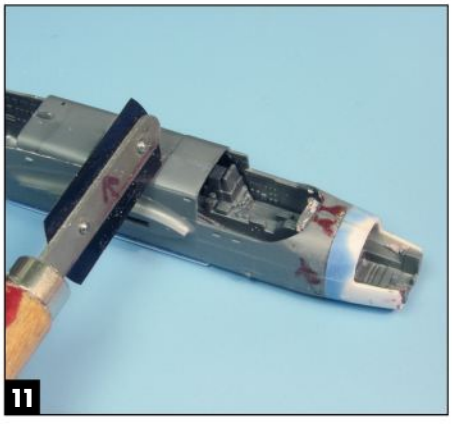
Short lengths of styrene rod, meticulously shaped, form the Firebee wingtip telemetry pods.



Carl painted the drones international orange, mixed from auto lacquers using FS12197 as the reference, then set them aside until the Invader was finished.

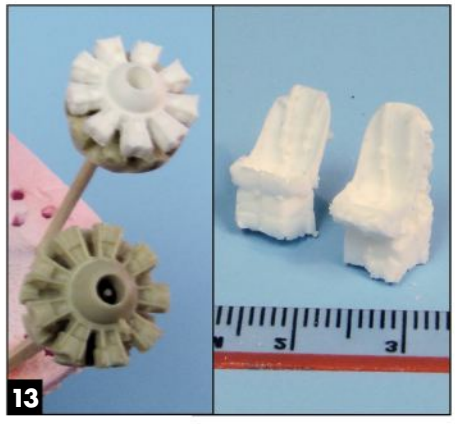


Carl rescued a glass nose for a B-26C from Airfix's old kit and replaced the solid eight-gun nose in Revell's kit. Luckily, both noses attached to the fuselage at the same points. He used 3M Acryl Blue glazing putty to blend the nose and fuselage. Carl colors the joins and surrounding areas with red marker to help him find low spots for filling.

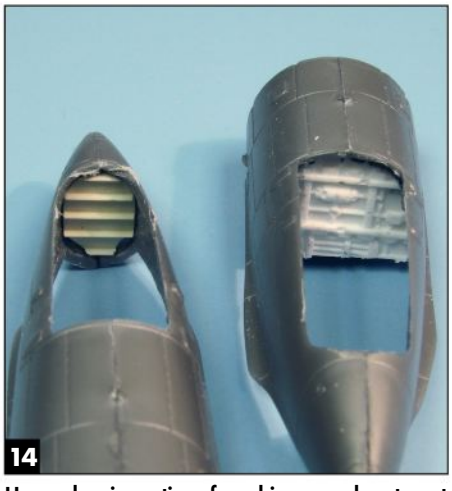


Anticipating a good amount of priming and other body work, Carl deepened the engraved panel lines with a razor saw to prevent their erasure.

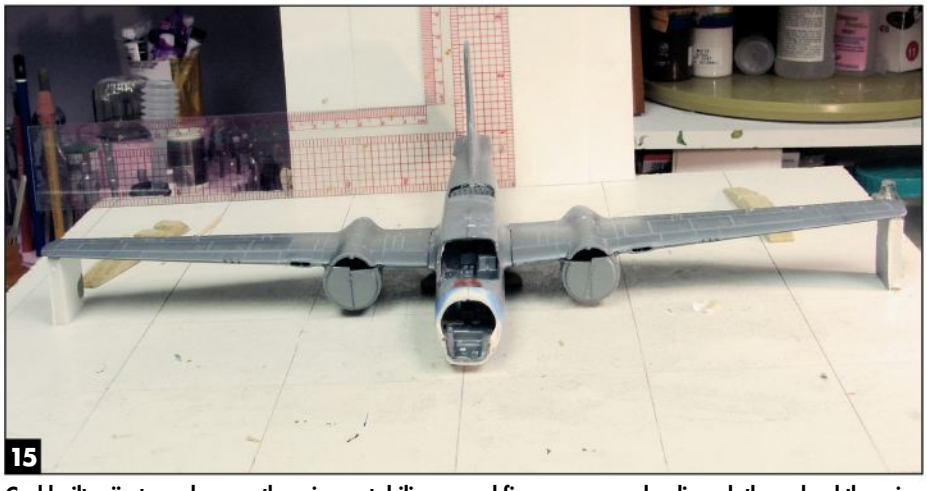
Over the past 10 years, whenever Carl has found a nice part from a kit, he's made an RTV mold and cast several resin copies to add to his spares box.



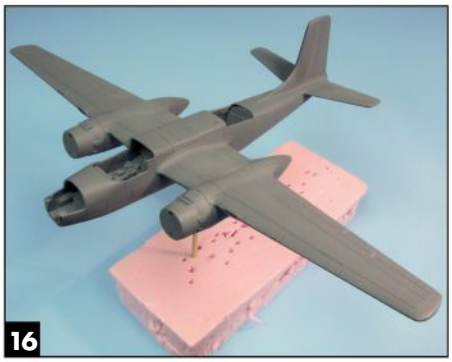
Engines and seats (still needing to be cleaned up) were just some of the parts he used from his extensive resin collection.



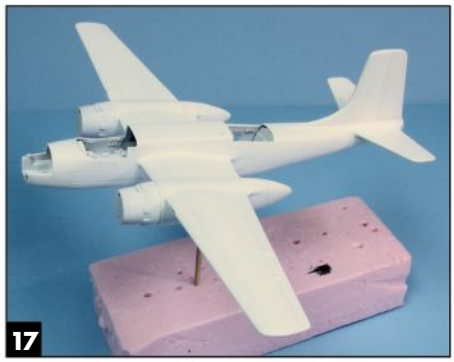
He used resin castings from his spares box to put front and rear fire walls in the nacelle wheel wells. According to Carl, the fire walls are "imagineering."



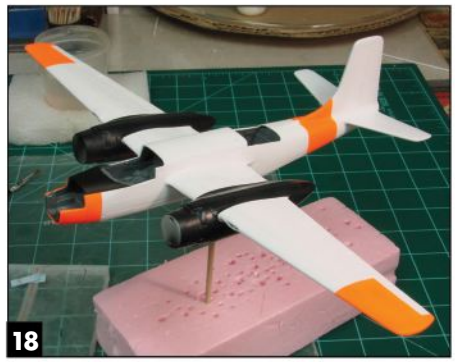
Carl built a jig to make sure the wings, stabilizers, and fin were properly aligned, then glued them in place.



After lightly sanding the plane and rubbing it down with 0000 steel wool, Carl washed it with running water, dish soap, and a toothbrush. Then he primed the fuselage with Sherwin-Williams Ultra Fill gray auto primer.

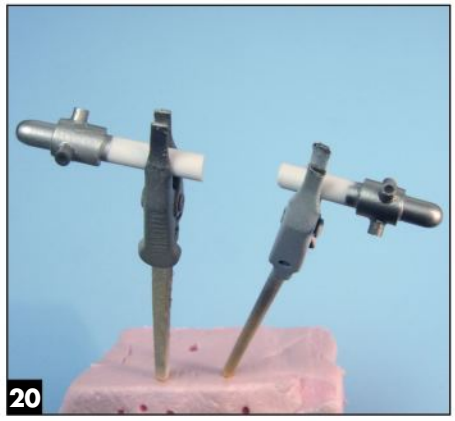


Carl filled blemishes with glazing putty, sanded, and put down another layer of Dupli-Color primer before painting the fuselage and wings with Dupli-Color gloss white acrylic lacquer.

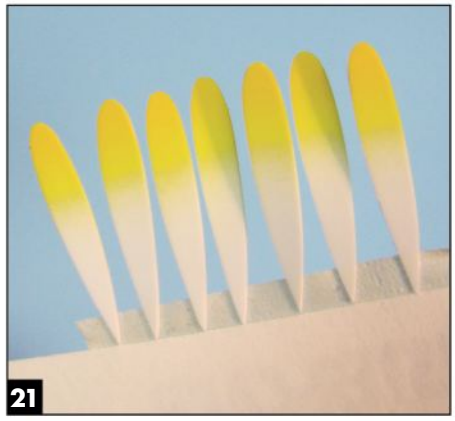


Once the white was dry, Carl masked the wings and fuselage to paint the engine nacelles Dupli-Color gloss black; another round of masking and he had airbrushed the DB-26C's Day-Glo orange sections Testors flourescent red enamel.

Next, Carl painted all of the small parts that still had to go on the DB-26C. He also hand-painted the interior using dark gray acrylic paint, followed by a black wash and dry-brushed white to pick out the details.



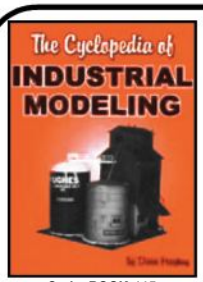
Finding the kit hubs and blades "clunky," Carl went to the spares box. When nothing suitable could be found, he scratchbuilt new hubs from styrene rod and tube.



Using one of the kit blades as a pattern, he traced its outline (six times) onto .010" sheet styrene. He cut out the blades with a small pair of scissors and shaped them with a sanding stick.

Once the blades were painted, Carl attached them to the hubs with white glue and then glued the propellers to the Invader.

Carl used spare decals and some old Microscale A-26 decal sheets to mark his drone director. The serial numbers are Woodland Scenics dry transfers. The canopy and other clear parts were vacuum-formed using the kit parts as masters. Once the undercarriage was on, he glued the Firebees in place. "Finally, I was done!" Carl says, pleased with his one-of-a-kind stunner. **FSM**



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Questions & Answers

A clinic for your modeling problems

By Aaron Skinner

How did he get the crosses to show under paint?

Q During the recently concluded *FineScale Modeler* World War I Aeroplane Group Build on the *FSM* online forum, and the associated video reports, I was hoping for more details and construction tips. For example, for Aaron Skinner's Fokker D.VII, he mentioned that he was hunting for a technique to paint over the camouflage applied to the fuselage as well as over the *balkenkreuz*. In the final episode, he showed a beautiful finish but never explained how he applied the blue. So how did he do it?

– Ronald Wells, Abingdon, Va.

A Thanks for tuning into *FSM*'s inaugural group build. Here's the skinny on how I did the blue on my Fokker.

After applying the lozenge and *balkenkreuz* decals, I sealed them with Tamiya clear gloss. I mixed equal parts Tamiya royal blue and clear gloss and thinned it with Tamiya thinner. Then I airbrushed the color over the fuselage in light coats until the underlying colors were just barely visible. Another coat of clear gloss sealed the blue for the dragon decals and weathering.

The World War I group build featured stunning work by a bunch of talented builders and provided tips for painting wood, weathering metal, and airbrushing elaborate camouflage. Look for a gallery of models from the group build in the February 2014 *FSM*, on sale Jan. 7. And check out the latest *FSM* group build, Heroes and Villains, featuring big-scale science-fiction and fantasy figures on the forum at www.FineScale.com.

Helping wounded warriors

Q A few years ago, I read about donating kits to a "Wounded Warriors" project. What is the address again?

– Noel Domingo
Baltimore, Md.

A After coordinating kit drives for deployed soldiers, the U.S. chapter of the International Plastic Modelers Society is now focusing its efforts on returned servicemen and women, especially those undergoing extended medical care.

In 2009, the Wounded Warriors Chapter started delivering donated models, tools, books, movies, and other hobby items to troops at Family Warrior Support Center and the Center for the Intrepid at Brooke Army Medical Center, Fort Sam Houston, Texas.

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Reader Tips

Solutions and innovations

By Mark Hembree

Tiny stripes made easy

I've never had much success painting the striped release handles on modern ejection seats (at least in small scales). Instead, I scratchbuild them using different colors of sewing thread. Typically, I'll knot 6" lengths of black and yellow thread together at one end, slip them through a paperclip, then tighten the loose ends in a swiveling pin vise. I clamp the paperclip to something flat and rigid, like a ruler, then spin the pin vise to wind the threads in a tight spiral. When I've achieved the desired effect, I clamp the pin vise to the ruler as well (keeping the threads taut) and coat the coiled thread in white glue to bind and smooth it. When the glue is dry (about 10-15 minutes), I have a single coiled strand flexible enough to shape. I can use it for face-curtain and seat-front release handles or the knife release switch on the side of the seat. The one shown here goes in a 1/72 scale Prowler.

– Greg Bale, Towson, Md.

Greg twists two colors of sewing thread to make the spiral stripes of ejection-seat releases.

Lacquer-thinner debonder

Have you ever super glued your fingers together and run out of debonder? It happened to me while super gluing photoetched-metal pieces to a Panther tank. If this happens to you, do as I do: Reach for a brush and lacquer thinner, smear the lacquer thinner on the bond, work it into the area, and slowly pull your fingers apart. The lacquer thinner will dissolve the super glue, and you'll be able to go out and get some more debonder.

Ernesto Urtiaga
Oviedo, Fla.

Chipping: a little dab'll do ya

To model chipped paint without the hassle of hairspray, the "salt method," or using masking fluid as a release agent, I prefer good old hair gel applied with a brush in the patterns you want. You can wash it off with warm water and a cotton swab. It gives you the control of masking fluid plus the ease of the salt method without damaging your paint job. You will be amazed at how easy it is.

Jack Stofmeel
Tilburg, Netherlands

Solder iron to tighten rigging

When tensioning monofilament rigging wires on World War I aircraft, I prefer to use a variable-heat soldering iron set at low temperature. Test it off the model and adjust the heat accordingly. The soldering iron maintains a nice, uniform heat, and the small working tip can access tight, hard-to-reach spots.

Mike Byerley
Avilla, Ind.

No rolling knives

It happens: You are building away, you set your knife down, and it rolls off the table. What happens next is a matter of luck, hopefully not bad. But it's easy to prevent. Fasten a cable tie on the knife handle, snip off the excess, and your knife's rolling days are over. You can even color-code them if you use different types of knives.

Before tightening the cable tie, I suggest coaxing a bit of curl into it by drawing it between your thumb and the knife handle (like curling a ribbon) so it wraps more readily around the handle.

Vince Pugliese
Toronto, Ontario, Canada

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Finishing Tamiya's 1/48 scale A6M3 Zero with heavy weathering and failing paint gives it authentic South Pacific fatigue.

BALTIC SEA *SCHNELLBOOT*

To paint this complex scheme, a modeler gets serious with Silly Putty masking and weathering.

ACHILLE LAURO F-14

Build Academy's 1/48 scale F-14 circa 1985, intercepting the *Achille Lauro* hijackers.

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Hasegawa's Osprey best V-22 yet

The now-familiar, once-controversial, and always-expensive Bell-Boeing V-22 Osprey is in service with the U.S. Marines and Air Force, and the Navy is looking at it as a replacement for its aging C-2 Greyhound carrier onboard-delivery aircraft.

Ospreys in this scale have been issued by Italeri, Esci, and Hobbycraft Canada. But Hasegawa's model brings the latest airframe updates, along with an easy-to-build kit.

The parts feature Hasegawa's typical fine, recessed panel lines and careful attention to detail. Issued as the Marine Corps' MV-22B, the molding includes several subtly raised parts locators on the fuselage that indicate other versions for future release. The way the wing structure is produced suggests that a "folded" (for storage) version is possible as well. The flaps are provided separately and can be installed as dropped or raised.

This kit comes with a clear display stand; there's a socket for it in the belly of the model that can be covered if you decide not to use it. I hope the inclusion of the two pilot figures is the start of a trend. The cockpit is OK, but the instrument panel decals don't provide much advantage over dry-brushing the raised detail on the plastic parts. I noticed the pilots' left-hand (collective) controls are missing.

I was pleased with the overall assembly

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and fit of the parts. It took only three hours to put the model together, and no filler was needed. I like the way the small cabin windows are added from the outside after the model is painted. Quite a few other small bits must be attached to the fuselage, including hand grips and blade antennas.

Vinyl grommets hold the rotor assemblies to the engine nacelles, and the nacelles to the wing. They allow the rotors to spin and the nacelles to pivot, with the extra benefit of allowing the assemblies to be removed for easier finishing and transport.

I painted the model in the standard three-gray tactical scheme. Then came the real time-consumer — decaling. There are dozens of small decals to apply, as well as large segments for the walkways over much of the wing, fuselage, and tail plane. Tiny stencils on the rotor-blade roots are broken down into a half dozen items per side — for each blade!

Most of the stenciling and warning signs on the fuselage are printed in blue gray that seems a bit too light. In fact, they nearly disappear on the lighter gray painted areas.

The unit designs for the outboard faces of the vertical stabilizers are provided in one piece and duplicated in segments if you choose to paint the background color instead. I used the one-piece approach and found trouble trying to get the decals to conform to the raised rivets and fin edges. Even my strongest decal solvent could not bend them to my will.

All told, I spent 31 hours on the Osprey, most of it masking, painting, and decaling. The model looks right, and I'll likely want to do a U.S. Air Force special-operations CV-22B and a folded version if offered. Certainly, Hasegawa's kit is the best Osprey in any scale.

– Paul Boyer

Kit: No. E41 **Scale:** 1/72
Manufacturer: Hasegawa, www.hasegawa-model.co.jp, from Great Planes Model Distributors, 217-398-3630, www.hasegawausa.com **Price:** $59.99
Comments: Injection molded, 155 parts (plus display stand), decals **Pros:** Up-to-date version; fine, recessed panel lines; excellent fit; optional-position flaps and landing gear; two crew figures; display stand **Cons:** Cockpit lacks pilots' left-hand (collective) controls; decals have trouble conforming to the surface

Airfix Focke-Wulf Fw 190A-8

Airfix's all-new Focke-Wulf Fw 190A-8 has beautiful recessed panel lines, excellent detail, options for a posable rudder, open or closed canopy, and retracted or extended landing gear. Add-on parts indicate other variants of Germany's frontline World War II fighter may also be forthcoming from Airfix. Two canopies are supplied, the "blown" one not used on this particular aircraft. A nice cockpit tub with raised details is provided, plus a separate seat, rudder pedals, stick, and decals for the instrument panel.

Kit: No. A01020 **Scale:** 1/72 **Manufacturer:** Airfix, 44-1428-701191, www.airfix.com, available from Hornby America, 253-922-7203, www.airfix-usa.com **Price:** $7.49 **Comments:** Injection molded, 54 parts, decals **Pros:** Great decals; nice detail; excellent clear parts **Cons:** Main landing gear too long; some fit issues; thick trailing edges; omissions of antennas and some decals

The kit has some cool innovations. The wing's upper and lower halves ensure correct dihedral; guns are glued into the wings before the halves are joined. Separate inserts for the exhaust stacks are added from inside the fuselage before it's glued together.

When the cockpit tub is mounted in the fuselage, the gunsight glass is meant to protrude through a hole in the glare shield. I had difficulty fitting the tub and, even after filing and fitting, the sight barely peeked through the hole. So, I added a small square of celluloid to its top to represent the glass. I also added masking-tape belts to the seat.

Fit is generally nice, and assembly goes quickly. The fuselage lacks rigidity before the upper cowl inserts and the wing are added; the cowling's forward-edge zipper fasteners help make it sturdier. Trailing edges of the flaps are too thick and don't quite match up with the ailerons.

The main landing gear is molded with fully extended oleos, and the struts themselves are slightly too long. Rather than try to redo the oleo and scissors, I took the easy way out by removing the upper 3/32" or so of the landing-gear struts and gear doors; in retrospect, a little too much. Oops. Weighted tires and great detail on the gear are welcome features.

The engine, with its separate fan, fits into the front opening of the fuselage. But on my sample, the slots didn't align with the keys inside the fuselage halves without trimming. I recommend installing this part earlier in the fuselage assembly, not the final step, because the cowling lip didn't match the curvature of the fuselage. Sanding was needed.

Color callouts reference only Humbrol paints; the superb decal sheet provides full stenciling along with attractive markings for a Jagdgruppe 10 aircraft with the snake motif on the fuselage. However, neither swastikas nor the spinner spiral are given. Also not in the kit are the FuG 16zy loop and Morane antennas for the belly; I added a stretched-sprue antenna wire as shown in the excellent box art.

The nits I picked are tolerable, considering the low cost of this new kit. It's not quite up to the standards of other new-tool Airfix kits I've built, but I liked this little bird and the 15 hours I spent building it. So, I rate it good "as is," just not quite complete. Adding antennas and gunsight details would accurize it nicely.

– Walt Fink

Academy PzKpfw 35(t)

Academy surprised the modeling world with its PzKpfw 35(t). A CMK kit from the 1990s had been the only choice until now.

The 35(t, for *Tchechoslowakisch*) was Czechoslovakia's main battle tank when Germany invaded in 1939. Although it was an advanced design for its time, with suitable agility, armor, and firepower, it proved mechanically unreliable, with a troublesome pneumatic transmission.

Academy's crisp, dark gray plastic molding features accurate surface detail and good fits: The only filler I needed was where I got carried away with cleaning up some sprue attachments. There were many knockout and sink marks to fill, but most were easily accessible. Both of the machine guns and the main gun are molded with open barrels.

The directions have large, clear pictures with detail colors pointed out along the way. The markings guide shows two tanks from the 6th Panzer Division, one for invading France and the other for invading the Soviet Union. Choose your vehicle before you start. If you choose the Eastern Front vehicle, drill several holes for extra fuel-can racks before adding the upper hull panels.

The lower hull is multipiece, but fit and alignment are good. I built the entire hull before adding the suspension. Make sure to drill the holes in the lower hull sides (parts A1 and A2) for the spare wheels before gluing on the upper hull.

I left the road wheels off for painting and snapped them into place later. The link-and-length tracks' upper run shows the sag seen in wartime pictures. There are no extra links provided, so be careful not to break or lose any.

Instructions do not mention the antenna shown on the box top. It should be glued to Part E10. There is no inner detail on the driver's hatches, so you will need to add your own if you want to leave one open. The jack block, which sits on top of two gas cans on the rear fender, needs additional detail, too. The nylon string supplied for the tow rope is too thick for the kit-supplied plastic ends.

The turret is a simple, one-step affair, but the gun is a disappointment. Several companies already have replacement barrels, and these could really improve the model. Make sure the vision blocks (B15) sit correctly in the turret roof or parts B13 won't fit. Inserting a figure in an open hatch will block any view of the featureless interior.

One full and one half figure are included; fit of the torso and legs on the full figure is poor. Four heads with different expressions are provided for the two figures. The faces are crisply molded, but the nose on one is deformed. The commander figure stood too high, so I removed the footrest from the turret.

Being an early-war tank, there is only one color option for this tank in German service: panzer gray. I primed with Vallejo German panzer gray primer and used AK Interactive's German gray modulation set to vary the finish. Then I weathered with washes and a warm filter for panzer gray made by Mig. I painted details, including the figures, with Vallejo and Humbrol paints.

The decals were thick, and I had trouble getting the Balkan crosses to settle into the rivet detail; none of the setting solutions I used worked. The divisional markings were transparent, allowing the panzer gray underneath to bleed through, and the decals silvered somewhat, though I applied them over a gloss coat. Aftermarket sources would provide better decals, and you might be able to find some markings for the Polish campaign.

Compared with plans in *Nuts & Bolts Vol. 11 Panzerkampfwagen 35(t) (Skoda LT Vz. 35)*, by John L. Rue (Nuts & Bolts, 1999), the model's height and width match but the length is about 4mm short.

A small kit, Academy's PzKpfw 35(t) took only 23 hours to complete — a good change of pace or a weekend build, letting you concentrate on weathering and painting.

This would be a good build for a beginner — or you could go the aftermarket route, superdetail the model, and build a great addition to any early-war diorama.

– Mike Scharf

Kit: No. 13280 **Scale:** 1/35
Manufacturer: Academy, www.academy.co.kr, from Model Rectifier Corporation, 732- 225-2100, www.modelrectifier.com **Price:** $39
Comments: Injection molded, 313 parts (1 nylon cord), decals **Pros:** Link-and-length tracks; figures with choice of heads; quick, easy build **Cons:** Thick decals; more choices of markings would have been nice

Zoukei-Mura's big, detailed *Uhu* is a hoot

The Heinkel He 219 *Uhu* (Owl) was one of the first purpose-built night fighters ever, and the first production aircraft with an ejection seat. It was also a seriously imposing beast.

Mimicking reality, Zoukei-Mura has released a seriously imposing kit as No. 6 in its 1/32 scale "Super Wings" series. The huge box contains 484 luxuriously detailed parts. This Owl is intended to be a *tour-de-force* in the inner workings of the subject, including the skeletal structure of the wings — but most parts must be cleaned, squared, sanded, and/or scraped to fit.

This big fighter is crammed with detail that rewards the patient modeler willing to invest time painting. The kit includes decals for the of individual instrument faces as well as placards

The kit is billed as an He 219A-0, the first of the production machines to see combat. There are two decal options in the kit, both using the same armament and radar options, but no optional parts for other versions or configurations. Although they aren't referenced anywhere in the retro "Pilot's Notes"-style instruction booklet, there are two versions of swastikas included in halves to place on your Owl. You'll need references to determine which set is appropriate. The comprehensive instructions include numerous detail, alignment, and painting notes, as well as photos of subassemblies. The build sequence is logical, but if you work on multiple sections at the same time, as I did, you will need to mind where the major subassemblies meet up; there is a lot of mating and slotting between them.

To save time, I opened just one side of the aircraft. This allowed me to leave out numerous engine details, most of the weapons, and even some of the rear fuselage details that cannot be seen once the kit is assembled.

The Owl's office is outstanding. I used kit decals for the individual instruments; all fit well and settled in nicely with setting

solution. For this and all other assemblies that affect the nose, great care must be taken to align and firmly seat all joints.

The center section rivals the cockpit for complexity, including a mechanic's jump seat (complete with molded seat belts) and the entire 30mm inclined cannon (known as *Schräge Musik*, or Jazz Music). I deviated slightly from the instructions by installing the guns on the bulkhead to obtain the correct angle, rather than floating in space on the ammo cans.

Three bulkheads go in the center of the aircraft (parts F-3, F-4, and F-7); they are key to the strength and alignment of the fuselage and the wing. I assembled them apart from the fuselage and checked both vertical and horizontal spacing and alignment with a square to ensure my Owl didn't have a crooked back.

The forward bulkheads, F-2 and F-8, are also keys for strength. This is where I got bit by my Owl — the forwardmost bulkhead, F-2, must be placed far enough away from the edge to allow tabs on the cockpit to slot fully. Remember my warning about building multiple sequences at once? If you install the oxygen bottles in the rear fuselage, make sure they are far enough below the attachment plane of the fuselage molding or they will interfere. I toyed with the idea of opening up the under-fuselage cannon tray, but the structure has numerous mold-line mismatches and flash. In the end, I kept everything closed and added more nose weight to assuage my fear of tail-sitting.

The kit provides a cleverly molded nose weight for the forward gas tank; unfortunately, it is too big. I had to remove all the assembly tabs, scrape some material away, and use heavy-duty clamps to get everything together.

The rest of the fuselage panels fit well after careful trimming and squaring of corners, and the whole tail-surface assembly was a breeze — no gaps, no filler. The wings are as complicated as the fuselage. Again, the skeletal structure is rife with large mold-line mismatches and flash.

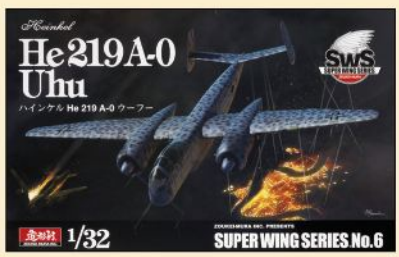
Detail on the engines and landing gear is astounding. Spark-plug wires and brake lines are included. The high fidelity extends to accurately lapped panel joints instead of simple scribed lines. Thanks to careful fuselage alignment, the wing mated perfectly with the fuselage. Applying skin to my Owl, I was pleased to see the wing panels fit perfectly to the fuselage and cowlings. I did have to clamp the wing-root fairings to the fuselage to get them to fit.

Z-M offers optional cast-metal landing gear; although it requires more cleanup than the plastic parts, I highly recommend it to support the model's weight. The tolerances are close in the gear bays, but everything fits. The position of the drop-down boarding ladder was a bit vague.

After I added the control surfaces, my Owl was ready for prime time. I painted top surfaces with Testors dark gray RLM 75, followed by RLM 76 light blue lines; the result looks like random gray dots, just like the original (I hope). The decals are thin and agreeable to setting solution, but they can tear if abused. A bit of weathering, a flat coat, and I was able to attach the myriad assemblies and parts, such as the engine and landing gear.

I spent an involved 85 hours on my Owl, and I could have — and should have — spent more. This is a kit that will reward loving care. The complexity and fit adjustments call for an experienced builder — but if you are up to the task, you should have a hoot.

– Chuck Davis



Kit: No. SWS6 **Scale:** 1/32
Manufacturer: Zoukei-Mura, www.zoukeimura.co.jp, from Volks USA, 386 Beech Avenue, Unit B-4, Torrance, CA 90501-6202, www.volksusa.com **Price:** $191
Comments: Injection molded, 484 parts (3 cast metal, 1 resin, 1 metal pin), decals
Pros: Excellent accuracy and detail; well-engineered for strength; nose weight included **Cons:** Fiddly fits; almost every part needed attention

Revell Snap-Tite M1A1 Abrams

Revell has released a cool, new snap-together kit of the M1A1 Abrams, America's main battle tank since the mid-1980s. It has 59 parts molded in tan, so you don't have to paint it if you don't want to. There is also a sheet of stickers to mark your Abrams.

Like most young modelers, I was told by my dad to follow the directions closely. So, I started by putting the back of the tank onto the bottom. It went on with a nice, solid snap.

Kit: No. 1973 **Scale:** 1/35
Manufacturer: Revell, 1850 W. Howard St., Unit A, Elk Grove Village, IL 60007, 847-758-3200, www.revell.com
Price: $15.95 **Comments:** Snap-together; injection molded, 58 parts (2 vinyl), stickers **Pros:** Good fits; nice engineering of track and wheels; easy track installation **Cons:** A few parts and instructions are mixed up

Next were the road wheels. Wow! There are a lot of wheels! Since there were so many, it took a while to clean up all the rough spots where the parts were attached to the sprue. They all fit, but they didn't make that snapping sound — maybe because they are supposed to roll.

I put the idler and drive-wheel assemblies on next, but the axles wouldn't stay in place on their own. That was a little confusing until I saw the next step, on the next page, putting covers over the axles to hold them in place. Maybe it would have been better for them to put both steps in one spot.

The axles have small nubs on the end that aren't shown in the instructions. I accidentally cut one off before I realized they were supposed to be there — luckily, my dad has super glue!

The tracks are supposed to be next, but I decided I wanted to paint my Abrams. So, I left them off to make it easier to paint.

I had trouble getting the main gun parts to snap together all the way, so my dad had to give them an extra push. Once the turret is together, the gun moves up and down easily. Because I was painting, I left the turret and the skirts off the tank.

In Step 12, I was having trouble getting the rear of the turret (Part 21) to fit into place. I had to ask my dad for help, and together we finally realized that Step 12 and Step 13 are printed out of order — once you install the storage baskets on the side of the turret in Step 13, you can install the rear of the turret shown in Step 12.

I added the rest of the parts to the turret except for the machine guns, which I painted separately using Testors gunmetal. That was my favorite part of the build.

My dad let me use his airbrush, so I painted the whole tank with Testors Army/Marine sand. I also put some black paint in the end of the barrel — that was fun! After the paint was dry, I put the stickers on by following the last page of the instructions. All the stickers worked well and fit perfectly.

I put the treads on the bottom of the tank and was happy that they fit easily — and they rolled! Then I put the turret and the machine guns on. Now my M1A1 looked ready to take on all competition.

I spent 2 hours and 45 minutes building my Abrams, although you could get it ready to roll quicker if you don't paint anything. I think Revell did a nice job, and any kid my age should have no trouble building it — although you have to think sometimes when the instructions aren't quite right.

I have to go get my Abrams back from my dad now so he'll stop making tank noises.

– Samuel Davis

Samuel is the 9-year-old son of longtime FSM *reviewer Chuck Davis. This is Samuel's first review, but he has been modeling for several years and has won several awards.*

Zvezda Disney "Planes" Dusty Crophopper

Dusty is a crop-duster from the small town of Propwash Junction. He has always dreamed of being a racer — but crop-dusters are supposed to dust crops, so Dusty has to stick to his daydreams while he does what he was born to do: dust crops.

But one day, after a tiring day on the fields, Dusty goes to talk to his best friend, Chuck the tanker truck. Chuck has always told Dusty that he could be a racer if he put his mind to it. So, they go to talk to the Skipper, an F-4U Corsair, to see if he will train Dusty.

After much prodding and a change in the Skipper's attitude, he decides to help teach Dusty a thing or two about racing. "Strut Jetstream," or Dusty, turns out to be a great racer — but you'll have to watch the movie yourself to see what happens!

There are 16 parts in this snap-together kit, and they are mostly detailed and nicely molded. Since the parts are pretty small, I built with only the pieces I needed for that step, rather than sanding and fitting all of the parts like I normally do. I followed the instructions, which are nice until you get to the stickers; only one side is shown in the instructions.

I had a few problems with Dusty. The landing gear is so small, and the fit is so hard, that I pretty much mutilated the piece. Thank goodness for super glue!

Also, the canopy does not fit very tightly. The flash on the propeller is impossible to remove because of the spacing, so don't try it or you'll end up hacking a propeller blade off!

The blue racing stripe is very hard to get aligned with the racing stripe on the other side. Also, I think Sticker D7 might be printed backwards. Other than that, the stickers are beautiful.

The kit took me 1 hour and 10 minutes to complete, but if you want it done quickly and you pay attention you might get it done faster. The best part of the build was probably seeing it all come together. The worst part was probably trying to put the landing gear in, and then not bumping it through the modeling process.

Overall, I think this is a great beginner's kit. I would recommend it.

– Carley Davis

Carley is Chuck Davis' 12-year-old daughter. Although this is her first FSM *review, she's no stranger to modeling. She's built kits for several years and won several awards.*

We chose to review this kit as well as Revell's Snap-Tite Abrams because they make a good introduction to modeling. If you have kids, grandchildren, nephews, nieces, or next-door neighbors you think might be interested in the hobby, either one of these kits are a fun place to start. – Aaron Skinner

Kit: No. 2061 **Scale:** 1/100 **Manufacturer:** Zvezda, www.zvezda.org.ru, from Dragon Models USA, 626-968-0322, www.dragonmodelsusa.com **Price:** $8 **Comments:** Snap-together, injection molded, 16 parts, stickers **Pros:** Realistic, sharp lines; mostly good fits; good design of stickers; propeller spins **Cons:** Landing gear fragile, fits poorly; poor fit of canopy; flash on propeller impossible to remove (but ends up well hidden); difficult to match racing stripes

Long-awaited Intruder big on detail

Loved by ground forces during the Vietnam War for its massive firepower and all-weather capabilities, the rugged A-6 Intruder could put bombs on target, rain or shine — *lots* of bombs.

With more than 700 parts tightly packed into Trumpeter's box, this kit does have a high parts count. However, many of the parts are used for ordnance.

Molds are mostly flash-free and the level of detail is high throughout the molds. A small photoetched-metal fret is included, as is cast-metal landing gear. Options abound: wings can be folded or extended; flaps and leading-edge slats can be dropped; the rudder can be posed; and full engines are provided to be displayed if you leave the engine bays open. The avionics bay can be lowered for display; speed brakes can be open or closed; and nose radar can be shown off, too.

Chris calls the cockpit of the big Intruder "awesome." Detail includes a fantastic instrument panel and ejection seats with photoetched-metal harnesses.

The build begins with the engines. The kit parts are detailed, but scratchbuilders can have a field day here. I covered the engines for a more streamlined look.

The cockpit comes next, and it is awesome. The instrument panel is fantastic; all the dials and switches look great. Detail in the seats is nice, but an aftermarket set might add even more. Photoetched-metal seat belts are included.

The main fuselage halves didn't fit very well; they needed a lot of filler, and I can still see a small seam. The cockpit fits nice and tight in the fuselage, though, as do the front landing gear bay and main fuselage

spar. I feared the model would be a tail-sitter, so I opted out of the nose radar and added a bunch of weight to the nose of the plane.

You will need to decide whether to have the wings folded or extended, and whether you want the flaps and slats up or down. As massive as the finished model is, I recommend folding the wings; it will save a lot of space on your model shelf. The wing-to-fuselage joint fit was nearly perfect, requiring very little filler.

Trumpeter included cast-metal landing gear to support this hefty model, and boy is it needed! Detail on the landing gear and in the gear bays is fine. I did choose to close the boarding ladder door, but that also can be posed open.

There are enough weapons in this kit to arm a small country: 24 Mk.82s with two variants; six M117s; two GBU-8 HOBOS; two AGM-12 Bullpups; and two AGM-45 Shrikes. You get all the correct bomb racks, a centerline fuel tank, and two wing-mounted fuel tanks, too.

I painted my Intruder using Testors Model Master gloss gull gray and insignia white. I also used willow green for the tip of the tail.

The decals were spectacular! I was impressed by their cooperative behavior. However, do cut the larger decals in half before applying them; they are very thin and can fold over on themselves. Otherwise, they settle well over surface details without help from solvents and with no silvering.

My model took about 45 hours to complete, about right for a kit of this complexity. I love all the options Trumpeter gives you with this kit, including the huge store of ordnance.

With the sometimes finicky fits, I wouldn't recommend this kit to a beginner. But with a little more skill and a lot of patience, you'll have an enjoyable time building this Intruder.

– Chris Oglesby

Kit: No. 02249 **Scale:** 1/32
Manufacturer: Trumpeter, www.trumpeter-china.com, from Stevens International, 856-435-1555, www.stevenshobby.com **Price:** $239.95
Comments: Injection-molded, 708 parts (33 photoetched metal, 4 vinyl, 3 cast metal), decals **Pros:** Fantastic decals; detailed engines and avionics bays; lots of ordnance; cockpit detail shines **Cons:** Fit of some of the major joints is poor; no figures

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Workbench Reviews

Pegasus "Terminator 2" aerial hunter-killer

James Cameron's 1991 science-fiction action epic "Terminator 2: Judgment Day" introduced cinema goers to the near extinction of the human race at the hands of machines. One of those machines, seen in the film's "future war" sequences, was the aerial hunter-killer. Shiny HKs buzzed over the ruins of Los Angeles intent on eradicating John Connor's fighters.

Although the vehicle's on-screen time is only a few minutes, it has intrigued modelers for more than 20 years. As a confessed hardware geek, I regretted not getting Horizon's vinyl kit of the vehicle when it was released in the early 1990s. So I was thrilled when Pegasus announced a kit.

Molded in heavy, medium gray plastic, the parts have sharp engraved detail. Minor mold seams need cleanup on some of the smaller parts, like the arms.

The instructions note that most of the kit's plastic is ABS (acrylonitrile butadiene styrene) and recommend using Tamiya Extra Thin Cement, Testors Liquid Cement, or super glue.

Fit is OK. I ran into a small problem in the first step, because the locators inside the engine pods appear to be off on one side. I cut all of the pins off and aligned the pod halves by hand during gluing.

Kit: 9016 **Scale:** 1/32
Manufacturer: Pegasus Hobbies, 909-982-6507, www.pegasushobbies.net
Price: $39.99 **Comments:** Injection-molded, 73 parts **Pros:** Good shapes; nice detail; movable engine pods; easy-to-read instructions; stand **Cons:** Fiddly construction; pebbly plastic complicates metallic finish

The four arms — I think they're supposed to be landing gear — are next, and again the fit is OK.

Be sure you attach the gun correctly. It looks like it could be left movable, but the instructions don't indicate that.

Large locators make the fit positive. Attaching the side-shelf panels (nos. B7 and B8) proved problematic; I removed the locators and sanded the sides to make them fit snug. The cheek panels — unnumbered in the instructions — go over other parts but balked before clicking in place. Leave the pod attachment sockets (No. A4) unglued so the engines rotate freely.

I left the spot and belly lights off until after painting. The engines, gun, and arms were painted separately.

I applied putty to many of the joins, especially the seams on the engines and around the "eyes" where the engine mounts meet the body. The plastic seemed to have pulled away from the edges during curing, leaving gaps.

The hunter-killer should be shiny, but the plastic is a bit pebbly. I airbrushed Alclad II gray primer and microfiller and sanded to smooth it before spraying gloss black and Alclad II chrome. Testors Metalizer burnt metal in the exhaust areas provided a little variety.

I pushed the subassemblies into position and glued on the clear parts.

I painted the base in shades of gray, then picked out the skulls on the ground with desert sand. Artist's oil washes and dry-brushing added contrast and detail.

The finished hunter-killer matches the aerial weapon from the movie. It's surprisingly small in 1/32 scale. I'd like to do one with lights and a more-detailed base.

Despite minor fit issues, Pegasus' model goes together nicely. The finished model looks terrific.

– Aaron Skinner

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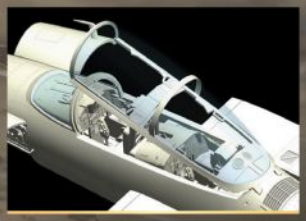

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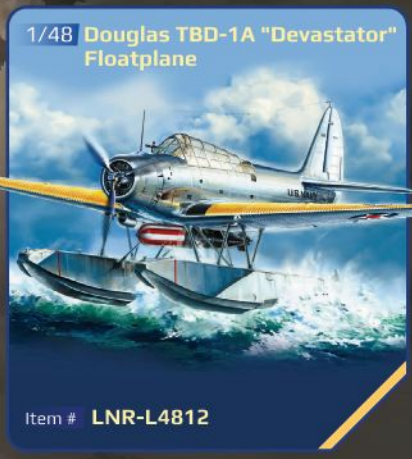

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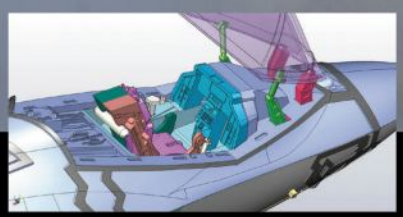

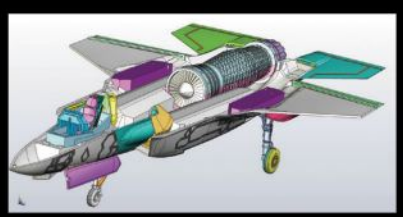

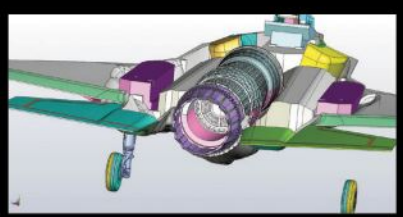

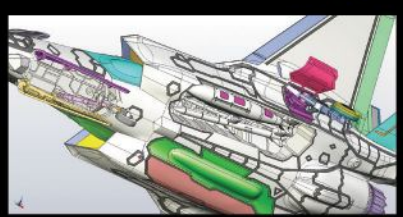

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